INTEGRATING JUSTICE AND SOCIAL EXCHANGE: THE DIFFERING EFFECTS OF

FAIR PROCEDURES AND TREATMENT ON WORK RELATIONSHIPS

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ABSTRACT

This research investigates whether procedural and interactional justice affect work-related outcomes through different social exchange relationships. The findings extend previous research by demonstrating that: (1) interactional justice perceptions affect supervisor-related outcomes via the mediating variable of leader-member exchange; and (2) procedural justice perceptions affect organization-related outcomes via the mediating variable of perceived organizational support.

ACKNOWLEDGMENT

There is substantial evidence that fairness is an important dimension affecting employees' actions and reactions within organizations. Despite this evidence, researchers still do not adequately understand the mechanisms through which fairness perceptions affect subsequent attitudes and behaviors. While recent research focusing on this issue is suggestive, it does not yet offer a complete picture of fairness processes in organizations. The purpose of this study was to provide a more developed organizational justice model by examining the concurrent effects of different justice types and social exchange processes.

To this end, we address two related questions that are currently attracting research attention: (1) To whom do employees attribute perceptions of fairness? and (2) By what mechanisms do employees' fairness perceptions affect attitudes and behavior? With regard to the first question, recent presented research suggests that individuals respond differently to the fairness associated with procedures (i.e., procedural fairness) versus interpersonal treatment (i.e., interactional fairness), because of their different sources (Malatesta & Byrne, 1996, Masterson & Taylor, 1996). However, at least one study examining both types of justice does not support this pattern of findings (e.g., Barling & Phillips, 1993), and the distinctiveness of these two types of justice has not yet been conclusively established (Cropanzano & Greenberg, 1997).

With regard to the second question, two recent studies suggest that answers may be found in social exchange theory. These studies suggest that social exchange variables, specifically leader-member exchange (LMX) and perceived organizational support (POS), may mediate the effects of individuals' justice judgments on their work attitudes and behavior (Manogran, Stauffer, & Conlon, 1994; Moorman, Blakely, & Neihoff, 1998). However, neither of these studies has examined the

separate contributions of interactional and procedural justice *as well as* the mediating effects of LMX

and POS simultaneously.

It is unfortunate that research has yet to examine the relevant justice and social exchange

variables within one study. Intercorrelations between these variables are often high, meaning that the

omission of one of these variables may lead researchers to find significant relationships that would not

otherwise exist if the omitted variable were included. We believe that the concurrent examination of

LMX, POS, interactional justice, and procedural justice is vital to our knowledge of fairness in

organizations. It is only by studying these variables simultaneously that we can fully understand how

employees experience the effects of fairness. Consequently, this study develops a comprehensive

model incorporating procedural and interactional justice, social exchange variables, and a wide variety

of outcomes.

THEORY AND HYPOTHESES

The Development of the Procedural and Interactional Justice Constructs

As originally conceptualized, the concept of procedural justice concerned individuals'

perceptions about the fairness of formal procedures governing decisions. The theory focused on

structural elements such as process control and opportunities for voice as the major determinants of

fairness perceptions (e.g., Thibaut & Walker, 1975). Later, Leventhal (1980) identified six justice rules

(accuracy, representativeness, bias suppression, consistency, ethicality, and correctability) thought to be

used by individuals in judging the fairness of procedures.

As research on procedural justice progressed, researchers came to recognize the importance of

another factor in determining fairness perceptions, namely interpersonal treatment. Specifically, Bies

and Moag (1986) proposed that individuals' fairness judgments are also based on the quality of

interpersonal treatment received during the execution of a procedure, a concept they labeled

interactional justice. They further hypothesized that interactional justice perceptions would primarily

impact attitudes and behaviors toward the person carrying out the treatment, unlike procedural justice

perceptions, which were thought to impact reactions to the organization.

In spite of Bies and Moag's (1986) proposals, researchers have chosen for the most part to

encompass interactional justice in a broadened concept of procedural justice, arguing that interactional

elements impact procedural justice perceptions, just as structural elements do (e.g., Cropanzano &

Greenberg, 1997), or that interpersonal and structural elements are inseparable (e.g., Tyler & Bies,

1990). However, two recent presented studies tend to dispute the combined procedural justice

concept. Instead, they support the original suggestions by Bies and Moag (1986) that employee

attributions for the source of interactional justice perceptions tend to generalize to the person carrying

out the interpersonal treatment (in these studies, the supervisor), while procedural justice perceptions

tend to generalize to the entity to which the procedures are attributable (in these studies, the

organization).

First, a field study by Masterson and Taylor (1996) reported that employees' interactional

justice perceptions predicted supervisor-related outcomes, while procedural justice perceptions

predicted organizational commitment and intentions to leave the organization. Second, a field study by

Malatesta and Byrne (1997) found that employees' interactional justice perceptions were positively

related to their commitment and citizenship behaviors directed at the supervisor, while procedural justice

perceptions were positively related to organizational commitment. A re-examination of past research

finds support from Moorman (1991), in which he surmised that, in general, procedural justice might

measure the fairness of the organization while interactional justice may measure the fairness of the

supervisor.

This pattern of results is supported by Folger and Cropanzano's (1998) discussion of the

importance of accountability. They note that, when reacting to perceived (in)justice, individuals seek to

identify the accountable party; i.e., the one with the power to engage in discretionary conduct. Once

identified, individuals' reactions are targeted at the responsible party. In the above studies,

organizations developed the procedures, while supervisors enacted them vis-à-vis employees. Thus, it

is logical that procedural justice perceptions affect reactions toward the organization while interactional

justice perceptions impact reactions relating to the supervisor.

Although this predicted pattern of differential effects has emerged from the above studies, other

studies have not found support for such a pattern (e.g., Barling & Phillips, 1993). This raises the

question about whether *mediating variables* may account for the inconsistencies in the research about

interactional and procedural justice effects.

Integrating Organizational Justice and Social Exchange Research

Social exchange theory may provide insight into what variables might mediate the distinct effects

of procedural and interactional justice on employees' reactions to the organization versus the supervisor.

Social exchange relationships are different from those based on purely economic exchange, in that the

obligations to one another are often unspecified and the standards for measuring contributions are often

unclear. They develop between two parties through a series of mutual, although not necessarily

simultaneous, exchanges that yield a pattern of reciprocal obligation in each party (Blau, 1964). One

party makes a contribution or provides a service to the other party, and in so doing develops an

expectation of a return at some future point in time. The other party, having received something of

value, develops a sense of obligation to reciprocate. Prior research has convincingly established that

employees are involved in at least two social exchange relationships at work: one with their immediate

supervisor, and one with the organization.

Leader-Member Exchange (LMX).   LMX is defined as the quality of the relationship

between the supervisor and his or her employee (e.g., Graen & Scandura, 1987). As is true for all

exchange relationships, "each party in an LMX must offer something the other sees as valuable and

each must see the exchange as reasonably equitable and fair" in order to continue it (Graen &

Scandura, 1987: 182). Two recent studies found that high quality LMX relationships lead employees to

engage in behaviors that are directly related to their supervisor, such as in-role behavior and OCBs

(Settoon, Bennett, & Liden, 1996; Wayne, Shore, & Liden, 1997).

Perceived Organizational Support (POS). POS reflects the quality of the relationship

between the employee and organization by measuring the extent to which employees believe that the

organization values their contributions and cares about their welfare (Eisenberger, Huntington,

Hutchison, & Sowa, 1986). POS develops through employees' assessments of their treatment by the

organization, and they subsequently use their judgments of POS to estimate their effort-outcome

expectancy. Thus, to the extent that the organization treats an employee well and values his or her

efforts, the employee may be expected to devote greater effort toward helping the organization achieve

its goals (Settoon et al., 1996; Wayne et al., 1997).

Social Exchange Variables as Mediators of the Justice➔Outcome Relationships

A review of the research on LMX and POS reveals that they are related to many of the same

outcomes that have been associated with fairness perceptions. However, despite the widespread use of

social exchange concepts as an explanatory mechanism for justice effects (e.g., Moorman, 1991), only recently have such mediating relationships been measured and tested.

An unpublished study by Manogran et al. (1994) suggested that LMX mediated the effects of interactional justice on OCBs, job satisfaction, and, to a lesser extent, organizational commitment. A recent study by Moorman et al. (1998) found that POS fully mediated the relationship between procedural justice and OCBs for three of the four OCB dimensions measured. Taken together, these findings suggest that justice perceptions are important inputs to employees' judgments of the quality of their exchange relationships with their supervisors and organizations. Further, these findings imply that the reason fairness perceptions appear to influence work-related attitudes and behaviors lies in the quality of employees' social exchange relationships.

This evidence, along with that suggesting that interactional and procedural justice affect employee reactions differently, leads us to propose the following: (1) the relationship between employees' interactional justice perceptions and their supervisor-related attitudes and behaviors should be mediated by their perceptions of the quality of their relationship with their supervisor (LMX); (2) the relationship between employees' procedural justice perceptions and their organizationally-related attitudes and behaviors should be mediated by their perceptions of the quality of their relationship with the organization (POS). In essence, we argue that employees perceive acts of fairness to be *contributions* that enhance the quality and desirability of their ongoing relationships. These contributions in turn obligate employees to reciprocate in ways that preserve the social exchange relationship, through voluntary behaviors or attitudes that benefit the party who treated them fairly. In order to test this predicted pattern of relationships, we developed hypotheses corresponding to the three "tests" for mediation (Baron & Kenny, 1986).

The Direct Hypotheses. The first condition for mediation is that the independent variable(s)
must relate to the dependent variable(s) in the absence of the mediator(s). Thus, employees'
interactional justice perceptions should be directly related to their attitudes and behaviors toward the
supervisor, while their procedural justice perceptions should be directly related to their attitudes and
behaviors toward the organization. In choosing specific attitudes and behaviors to examine, we drew
from existing research (e.g., Settoon et al., 1996; Wayne et al., 1997). Thus, we identified performance
(as rated by the supervisor) and OCBs directed at the supervisor as supervisory-related outcomes.
Similarly, OCBs directed at the organization, turnover intentions, and organizational commitment have
been identified as organizationally-related outcomes. Finally, job satisfaction, because of its multi-
faceted nature, was treated as an outcome relating to both supervisors and organizations (Spector,
1997).

Hypothesis 1: Employees' interactional justice perceptions will be positively related to their:
(a) performance; (b) OCBs directed at the supervisor; and (c) job satisfaction.

Hypothesis 2: Employees' procedural justice perceptions will be positively related to their: (a)
OCBs directed at the organization; (b) organizational commitment; and (c) job satisfaction; and
will be negatively related to their (d) turnover intentions.

Justice→Social Exchange. The second condition for mediation is that the independent
variable(s) must be significantly related to the mediator(s). Previous research has shown that
interactional justice is positively related to LMX, and that procedural justice is positively related to POS
(e.g., Manogran et al., 1994; Moorman et al., 1998). Given that these relationships have been
established previously, they are formally hypothesized, although our analyses will check for them as a
condition of mediation.

The Mediation Hypotheses. The final condition for mediation is that, when both the

independent variable(s) and mediator(s) are included, the direct relationship(s) should become

significantly smaller (partial mediation) or non-significant (full mediation). In this study, we specifically

hypothesize that LMX will mediate the relationship between interactional justice and performance,

OCB-supervisor, and job satisfaction. Although a mediation relationship has been shown previously for

OCBs in general and job satisfaction (Manogran et al., 1994), it has not been tested for performance,

nor has it been tested in a complete model including the competing explanatory variables of procedural

justice and POS. Similarly, we hypothesize that POS will mediate the relationship between procedural

justice and OCB-organization, turnover intentions, organizational commitment, and job satisfaction,

extending the work of Moorman et al. (1998).

Hypothesis 3: The direct relationships between interactional justice perceptions and

performance, OCB-supervisor, and job satisfaction will be mediated by LMX.

Hypothesis 4: The direct relationships between procedural justice perceptions and OCB-

organization, organizational commitment, job satisfaction, and turnover intentions will be

mediated by POS.

METHOD

Participants

The data analyzed in this study were collected before the implementation of a new performance

management system at a large, public university in the northeast United States. We invited 701 of the

over 900 employees attending training sessions for the new system to participate in this study. Of those

invited, 651 completed surveys (a 93% response rate). All participated before being introduced to the

new system. The majority of respondents were female (66.7%), with an average organizational tenure of

ten years and job tenure of over seven years.

Procedure

Participants were asked to fill out a survey during the 30-minute period immediately prior to

attending training. The survey was designed to gather information about job-related attitudes and

behaviors, as well as performance management procedures and interactions. To ensure confidentiality,

surveys were pre-printed with a unique code number so that the link between a particular number and

the employee's identity was known only to the researchers. All survey items, except for demographic

variables, were assessed using a five-point scale that indicated the respondent's level of agreement with

the statement, ranging from 1=strongly disagree to 5=strongly agree. Scales were formed by computing

the average value of the included items.

Justice Variables

Interactional justice was measured using seven items from Folger and Konovsky (1989),

which were designed to tap four interactional justice dimensions identified by Folger and Bies (1989):

providing adequate consideration, applying criteria consistently, providing timely feedback, and being

truthful. An example item from this scale (α=0.94) is: "During my last performance evaluation, my

supervisor was honest in dealing with me."

Procedural justice was operationalized through two items (α=0.77) intended to measure the

fairness of the performance appraisal procedure, based on previous published measures (e.g., Tyler &

Lind, 1992). The items were: "The performance evaluation system at [organization] is a fair one" and

"I am satisfied with the way performance evaluations are done at [organization]."

Exchange Relationship Variables

LMX was measured using the seven-item (α=0.89) Leader-Member Exchange scale (LMX-

VII; Graen & Scandura, 1987). Items included: "My working relationship with my supervisor is very

effective" and "I always know how satisfied my supervisor is with what I do."

Due to survey constraints, *POS* was assessed using five of the highest loading items from the

short form of the Survey of Perceived Organizational Support (Eisenberger et al., 1986). An example

item (α=0.83) is: "The [organization] cares about my general satisfaction at work."

Outcome Variables

Supervisor Related Outcomes. *Performance* was determined from official personnel

records of employees' performance ratings, and reflects performance evaluations conducted by the

employees' supervisors following the first full cycle with the new appraisal system. Supervisors used a

five-point rating scale (1=unsatisfactory; 2=below expectations; 3=meets expectations; 4=exceeds

expectations; 5=outstanding). Because this data was taken at a later point in time, it was available for

only 205 of the 651 employees filling out surveys. ANOVAs indicated that the two samples did not

differ significantly on any variables used in this study.

OCB-Supervisor was measured with seven items (α=0.78) designed to measure employees'

extra-role behaviors benefiting the work unit and thus, the supervisor. This variable is similar to the

OCB-Individual measure (Williams & Anderson, 1991), and includes dimensions reflecting employees'

willingness to help coworkers (altruism), courteous treatment of coworkers (courtesy), and careful

attention to their job (conscientiousness; e.g., Organ, 1988). An example item is: "I go out of my way

to help co-workers with work-related problems."

Organization Related Outcomes. Due to survey constraints, *organizational commitment*

was measured using three items (α=0.74) from the short form of the Porter, Steers, Mowday, and

Boulian (1974) affective commitment scale. The items dealt specifically with value similarity and pride in

membership, such as: "I am proud to tell others that I am part of [the organization]."

Turnover intention was operationalized through two survey items (α=0.77) measuring the

employee's intent to leave the organization within various periods of time (e.g., Bluedorn, 1982). The

items are: "It is likely that I will leave my employment with [organization] within one year," and "I intend

to keep working at [organization] for at least the next three years" (reverse-coded).

Finally, *OCB-Organization* was measured with two items (α=0.83) reflecting the employees'

discretionary behaviors directed at the defending the organization (civic virtue dimension; e.g., Robinson

& Morrison, 1995). The items are: "I defend the [organization] when other employees criticize it," and

"I defend the [organization] when outsiders criticize it."

Supervisor and Organization Related Outcome. *Job satisfaction* was measured with two

items (α=0.76) from the Index of Organizational Reactions (Dunham & Smith, 1979): "Compared to

most jobs, mine is a pretty good one" and "All in all, I am satisfied with my job."

Statistical Analyses Method

Thirty-eight observed variables and eleven factors were used to perform a structural model

analysis using the EQS computer program (Bentler, 1995). Using the two-step method (Anderson &

Gerbing, 1988), we examined the measurement and structural models in separate steps. First, the

measurement model was analyzed to test the adequacy of the hypothesized factor structure for all

variables. Second, we evaluated several structural models representing the hypothesized structural

relationships between latent and measured variables. We analyzed the structural models using EQS's

multi-sample technique (Bentler, 1995), allowing us to make efficient use of all of the survey data

(N=651), as well as the performance data (N=205). Intercorrelations between variables, means, and

standard deviations are presented in Table 1.

Insert Table 1 about here.

RESULTS

Measurement (Confirmatory Factor Analysis) Model

The global fit indices of the measurement model (χ^2=1382.95, df=591; GFI=.88; NNFI=.92;

CFI=.93) indicate that the hypothesized factor structure fits the data well. Lagrange multiplier tests for

adding parameters suggested adding one residual correlation, between two items of the POS scale.

Because these two items were reverse-coded items, it is possible that they covary for methodological

reasons above and beyond the covariance explained by their common factor. Hence, we permitted the

errors of these items to covary, and we reran the measurement model with this respecification. The

results of this respecified model were significantly improved over the initial measurement model (diff

[χ^2=53.58, df=1], p<.05), with good global fit indices (χ^2=1329.37, df=590; GFI=.89; NNFI=.93;

CFI=.93). All factor loadings for the measurement model were significant, confirming the factor

structure.

Structural Model Analyses

The second step in the analysis was to run structural models depicting the hypothesized

relationships between factors. All structural models contained the respecification from the measurement

model, as well as several *a priori* covariances between the disturbance terms of the outcome variables

to account for previously established relationships that are not the focus of this research. In addition,

one final set of relationships was added to the models to reflect findings from past research: a reciprocal

relationship between POS and LMX (Wayne et al., 1997).

We tested our hypotheses using several models. First, we modeled the proposed direct

relationships between interactional justice and procedural justice to the outcome variables (the *direct*

model; see Figure 1). The results of this model showed that the paths are significant and in the

predicted direction, supporting hypotheses 1 and 2. The global fit indices, however, revealed that,

overall, our data are not consistent with this direct model (χ^2=3888.50, df=1274; GFI=.79;

NNFI=.82; CFI=.83), implying that these structural relationships alone do not adequately explain the

relationships present in our data.

Insert Figure 1 about here.

Next, we tested a model in which LMX and POS were incorporated as mediating variables

between interactional justice, procedural justice, and the outcome variables (the *mediation model*; see

Figure 2). The global fit indices for this model were good, indicating that our data are consistent with

the model (χ^2=2821.15, df=1266; GFI=.84; NNFI=.89; CFI=.90) and that it is a significant

improvement over the direct model. Replicating past research, the relationships between interactional

justice and LMX and between procedural justice and POS were both positive and significant.

However, contrary to past findings, the path from LMX to POS was non-significant, indicating that

there may not be a reciprocal relationship between LMX and POS.   This non-significant path was set

to zero in all subsequent analyses.

An examination of the relationships between LMX and POS and their respective outcome

variables reveals the paths to be significant and in the directions predicted, providing initial support for

mediation (hypotheses 3 and 4).   However, a complete test of mediation requires that both the direct

and indirect paths be modeled simultaneously (Baron & Kenny, 1986). Therefore, we ran an additional

model that incorporated both the direct and mediated paths from the previous two models. In order to

draw conclusions about mediation, we utilized the decomposition of effects results, in which the total

effect of an independent variable on a dependent variable is broken down into its indirect and direct

effects (e.g., Brown, 1997; Tabachnick & Fidell, 1996). A significant indirect effect indicates that a

significant amount of the independent variable's total effect on the dependent variable occurs through the

mediator. In the previously run direct model (Figure 1), the total effect is equal to the direct effect,

because there were no indirect paths. Therefore, a significant indirect effect in this model, by definition,

reflects a significant decrease in the independent variable's direct influence on the dependent variable,

and thus mediation. Moreover, the significance or non-significance of the direct effect in this model can

be used to draw conclusions about full versus partial mediation. Because of this model's complexity,

we have not shown it as a figure, but rather discuss the results below. All estimates are reported as

standardized path coefficients.

Consistent with hypothesis 3, LMX fully mediates the relationships between interactional justice

and both job satisfaction and OCB-Supervisor as shown by both the significant indirect effects and the

non-significant direct paths in the presence of LMX (job satisfaction: total effect=.16, indirect

effect=.16, $p<.05$, direct effect= .001, n.s.; OCB-Supervisor: total effect=.15, indirect effect=.13,

$p<.05$, direct effect=.02, n.s.). However, the indirect effects between interactional justice and

performance were not significant (indirect effect=.036, n.s.); therefore, there is no support for the

proposed mediation of this relationship by LMX.

With regard to hypothesis 4, this model demonstrates that POS fully mediates the relationships between procedural justice and job satisfaction (total effect=.29, indirect effect=.24, p<.05, direct effect=.05, n.s.), and between procedural justice and turnover intentions (total effect=-.12, indirect effect=-.16, p<.05, direct effect=.04, n.s.). Furthermore, POS partially mediates the relationships between procedural justice and both OCB-Organization and organizational commitment. In both cases, the indirect effects are significant while the direct paths remain significant (although reduced) in the presence of POS (OCB-Organization: total effect=.20, indirect effect=.29, p<.05, direct effect=-.09, p<.05; Organizational commitment: total effect=.26, indirect effect=.36, p<.05, direct effect=-.11, p<.05). In these last two cases, while the direct effects remain significant, they comprise only 23-24% of the total effect of the independent variable on the dependent variable, with the remaining 76-77% occurring through the mediating variable of procedural justice. Overall, these results support hypothesis 4.

Alternative Structural Model

Finally, we ran one alternative model testing our assertions that interactional justice directly influences LMX (and not POS), and procedural justice influences POS (and not LMX). To test this, we added two paths to the mediated model: (1) interactional justice to POS; and (2) procedural justice to LMX. The results of this test reveal that the additional paths are not significant, nor is the overall model a significantly better fit (diff[χ^2=12.87, df=5], n.s.), providing additional support for our hypothesized pattern of relationships.

DISCUSSION

By studying multiple justice and social exchange variables together, we have demonstrated that interactional and procedural justice are differentially related to the social exchange relationship variables

of LMX and POS. These findings highlight the importance of matching the source of the fairness to the

social exchange relationship and outcome variables studied as consequences. Further, the relationship

from justice perceptions to employee reactions is apparently an indirect one: LMX fully mediated the

relationships between interactional justice perceptions and both job satisfaction and OCB-Supervisor,

while POS fully mediated the relationships between procedural justice and both job satisfaction and

turnover intentions, and partially mediated its relationships with both organizational commitment and

OCB-Organization.

These results suggest that employees' perceptions of the fairness of a singular event (i.e., a

performance appraisal procedure, a meeting with one's supervisor) become integrated into their history

of experiences with the accountable party, which in turn influences their ultimate attitudes and behaviors

toward that party. By measuring both justice and social exchange perceptions, researchers can better

understand how organizational conditions and supervisors' actions affect these relationships, and how

the relationships drive attitudes and behaviors. At this time, we do not have an explanation for why

some relationships were fully mediated while others were only partially mediated, although we hope that

continuing research in this area can provide additional insight into the nature of these relationships.

This study also contributes to the social exchange literature through its identification of fair

actions, either through interpersonal treatment or organizational procedures, as antecedents of different

social exchange relationships. Further, the overall pattern of relationships between LMX, POS, and

outcomes supports and extends the findings of several recent studies (e.g., Settoon et al., 1996; Wayne

et al., 1997), with one exception. Our study failed to replicate a reciprocal relationship between LMX

and POS (Wayne et al., 1997), although POS positively affected LMX. This finding may be unique to

our context, in that the organization studied had undergone some major policy changes that most likely

negatively affected employees' POS. Given the large-scale and pervasive negative changes at the organizational level, it could be that employees' POS perceptions trickled-down to affect their LMX perceptions (i.e., their relationship with a person in the organization), although their relationships with individuals could not change how employees felt about the level of organizational support.

Overall, the contributions of this research must be viewed in light of several limitations. First, the data for this study, except for performance data, were gathered at one point in time, so no inferences of causality can be conclusively established, nor can we discount the possibility of reverse causality. Similarly, all data except performance data were collected via self-report surveys of employees, giving rise to concerns about common method bias. Our findings are strengthened somewhat by our use of structural equation modeling and its simultaneous estimation of the measurement and theoretical models, thereby testing the hypothesized causal framework in the absence of measurement error and other extraneous influences (Hoyle, 1995). However, a longitudinal design, cross validation of the findings, and increased number of sources of data would enable us to further assess the causality of the hypothesized relationships. Second, it is possible that the use of shortened measures of POS and OCBs may have had an impact on the findings resulting from the study, although the nature of the items included and the measures' acceptable reliabilities lead us to believe this threat is not high. Finally, although the hypothesized model was consistent with the data, it does not preclude the existence of other models that would fit the data equally well. Although we tested one plausible alternative and found it inferior to the proposed model, we acknowledge that there may be other untested alternatives that would adequately represent the data, or omitted variables that might reflect a more complex process than is depicted in our model.

Despite these limitations, the results of this study have several important implications. First, researchers may have much to gain by distinguishing between the fairness of procedures versus interpersonal treatment, given that they appear to work through distinct processes to affect different employee attitudes and behaviors. Perhaps even more important is the role of social exchange relationships found in this study. Social exchange relationships appear to be the most direct antecedents of employees' attitudes and behaviors, and provide a mechanism for understanding how the perceived fairness of single events can have long-term effects within organizations. Overall, we stand to gain from integrating and testing justice and social exchange concepts together, as well as by testing competing variables (interactional versus procedural justice, LMX versus POS) simultaneously. As our results indicate, studies that examine only one type of fairness or social exchange relationship may erroneously conclude that relationships between fairness and outcomes exist when, in reality, those relationships may *not* exist or may change substantially in the presence of the multiple types of fairness and social exchange variables. For example, Manogran et al.'s (1994) study suggested that LMX mediated the effects of interactional justice on organizational commitment—a relationship contrary to our findings, and perhaps explained by the more complete set of variables tested in the present study.

In this study, we have focused exclusively on the supervisor as the agent enacting organizational procedures. Future research should examine the extent to which our results generalize to other organizational agents such as coworkers or team members. Such research would be particularly important for organizations moving toward the implementation of self-managing teams, where team members rather than supervisors dominate day-to-day operations.

Future research also should examine whether the distinction between interactional and procedural justice is as clear under circumstances different from the performance appraisal context

studied here. In addition, it might be useful to specifically measure employee's attributions of different

actions under the discretionary power of supervisors versus organizations—a mechanism hypothesized

to be at work but not explicitly measured in this study. Finally, given increasing evidence of the

distinctiveness of interactional and procedural justice, researchers should continue to examine this issue.

In particular, researchers may gain by investigating the antecedents of interactional and procedural

justice perceptions to better understand the structural, interpersonal, and other factors that may affect

such perceptions.

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TABLE 1

Means, Standard Deviations, Correlations

| Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9
1 Interactional Justice[a]	3.21	.89									
2 Procedural Justice[a]	2.65	1.07	.42*								
3 Leader-Member Exchange[a]	3.37	.86	.67*	.38*							
4 Perceived Organizational Support[a]	2.84	.78	.18*	.52*	.35*						
5 Job Satisfaction[a]	3.70	.85	.30*	.37*	.48*	.49*					
6 OCB-Supervisor[a]	4.08	.49	.19*	.04	.27*	.10	.25*				
7 OCB-Organization[a]	3.37	.91	.12*	.22*	.27*	.46*	.43*	.48*			
8 Turnover Intentions[a]	2.31	.99	-.17*	-.14*	-.24*	-.26*	-.54*	-.18*	-.36*		
9 Organizational Commitment[a]	3.42	.80	.22*	.32*	.37*	.61*	.63*	.32*	.73*	-.50*	
10 Performance[b]	3.65	.78	.19*	-.05	.16*	-.10	.07	.25*	-.03	.04	-.06

* p<.05

[a] Intercorrelations for variables 1-9 were computed by EQS using the final measurement model of employee response variables (N=651).

[b] Correlations between performance and other variables were computed by EQS on a sample of 205 employees.
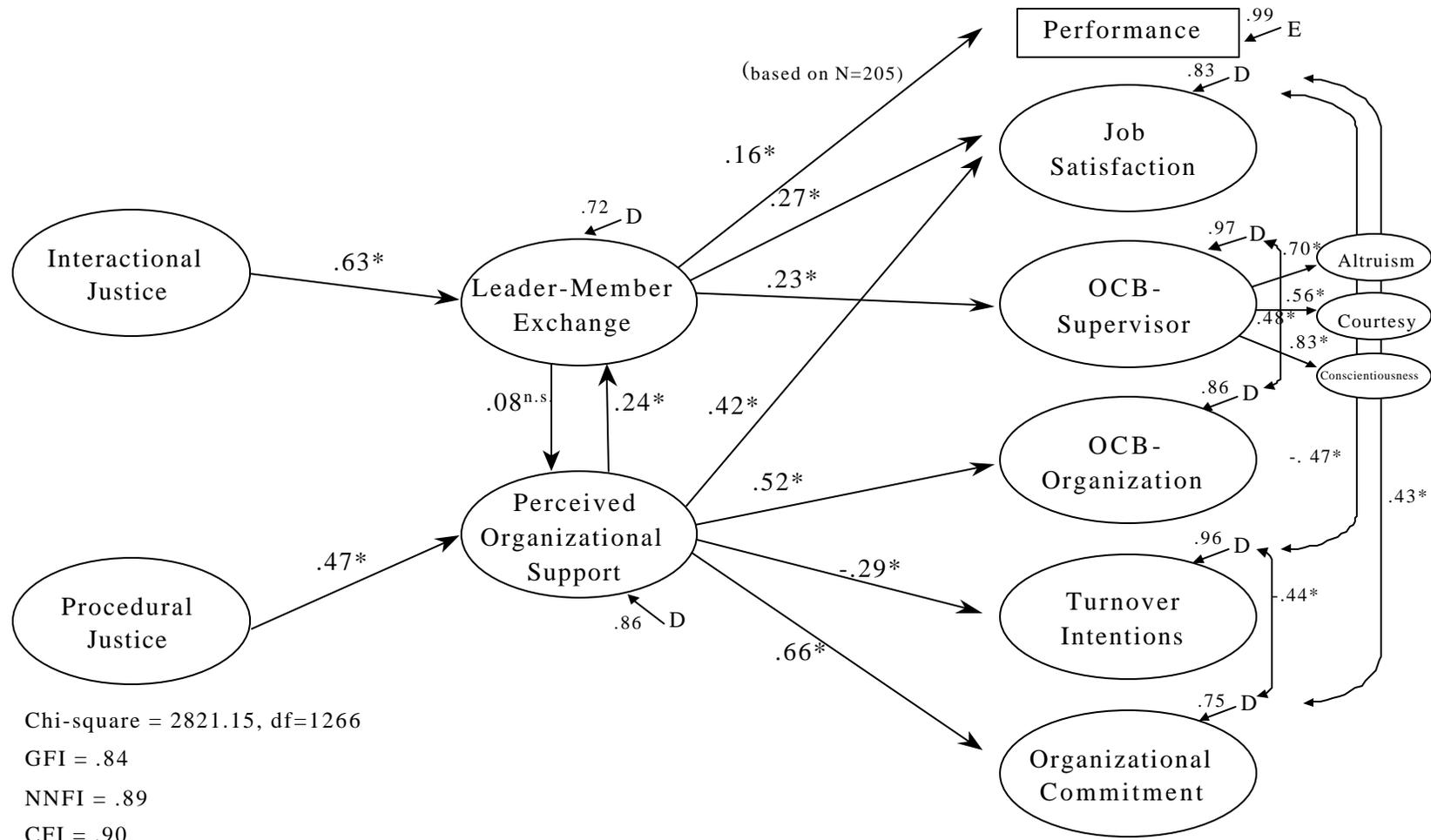
FIGURE 1

Structural Equation Modeling Results: Direct Model
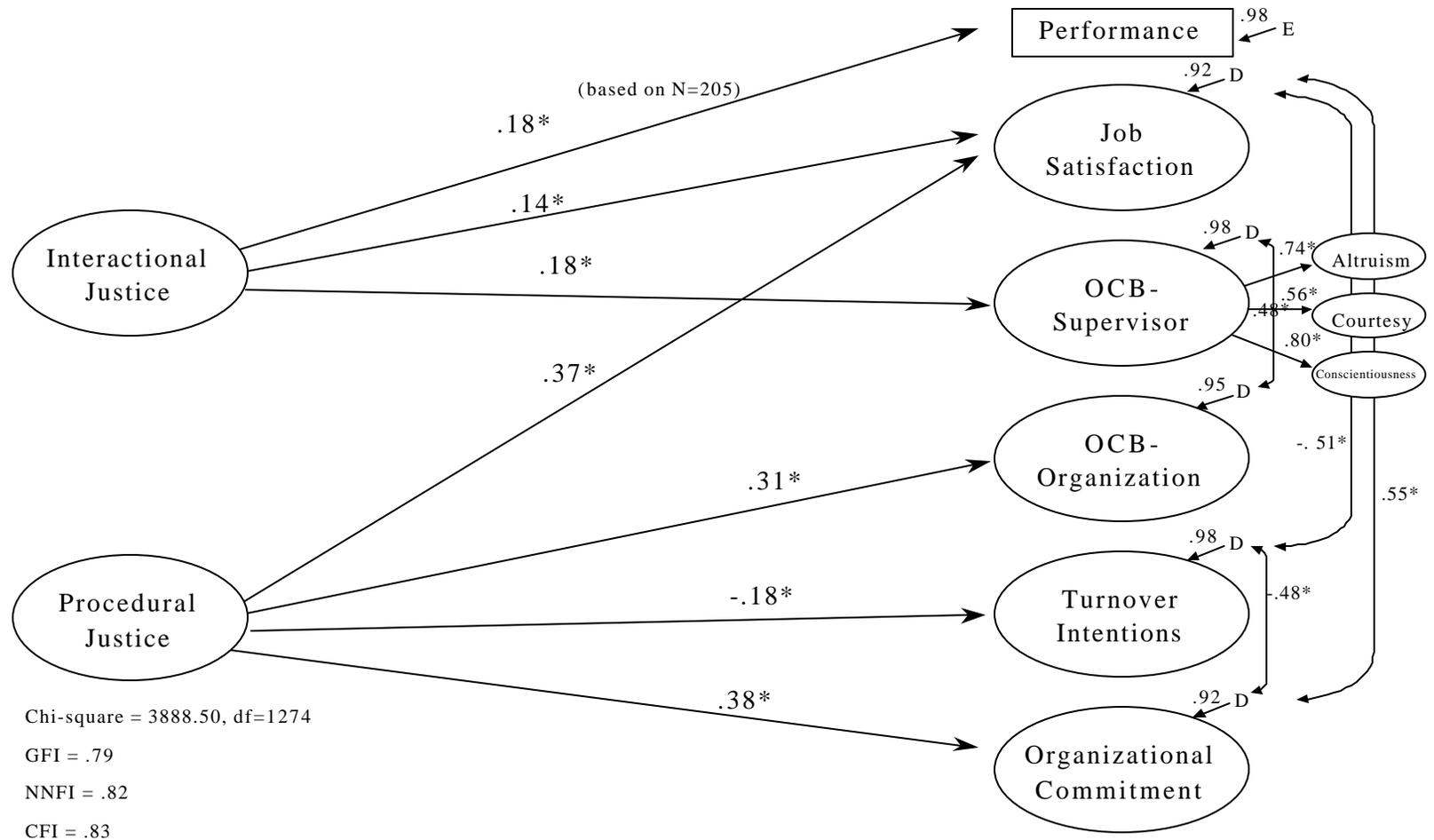
Final structural model results, with ovals representing latent factors, rectangles representing measured variables. Path coefficients are standardized, with significance levels determined by ratios on unstandardized coefficients (*p<.05).

FIGURE 2

Structural Equation Modeling Results: Mediation Model

Final structural model results, with ovals representing latent factors, rectangles representing measured variables. Path coefficients are standardized, with significance levels determined by ratios on unstandardized coefficients (*p<.05).