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DISSERTATION

EFFECTS OF PERCEPTIONS OF ORGANIZATIONAL JUSTICE, IDENTIFICATION, AND SUPPORT ON OUTCOMES WITHIN WORK TEAMS

Submitted by

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In partial fulfillment of the requirements

For the Degree of Doctorate in Philosophy

Colorado State University

Fort Collins, Colorado

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WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY ZINTA STOFBERG BYRNE ENTITLED THE EFFECTS OF PERCEPTIONS OF ORGANIZATIONAL JUSTICE, IDENTIFICATION, AND SUPPORT ON OUTCOMES WITHIN WORK TEAMS BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTORATE OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

EFFECTS OF PERCEPTIONS OF ORGANIZATIONAL JUSTICE, IDENTIFICATION, AND SUPPORT ON OUTCOMES WITHIN WORK TEAMS

Social exchange theory (Blau, 1964) and the relational model of organizational justice (Tyler & Lind, 1992) were integrated to form a single mediated moderated model of justice predicting organizational outcomes, using the supervisor and team members as sources of fairness. One hundred and seventy-seven supervisor-subordinate dyads from three separate organizations located across the United States completed surveys measuring perceptions of procedural, interactional, and distributive justices emanating from the supervisor and coworker. In addition, participants provided ratings on perceived support from the supervisor and coworkers; two indicators of identification: workgroup identification towards supervisor and coworkers, and commitment towards supervisor and coworkers; satisfaction with supervisor and coworkers; and ratings of organizational turnover intentions. Supervisors rated permission-granting employees on organizational citizenship behaviors (OCB) beneficial to the supervisor and team members, as well as job performance.

Results show that individuals perceive fairness emanating from their coworkers in addition to their supervisors, providing supportive evidence for justice as a multi-foci construct. Results of mediated moderated regression analyses

showed that interactional justice from coworkers positively predicted satisfaction with coworker, indirectly through perceived coworker support. Coworker support fully mediated the relationship between the interaction of coworker commitment with coworker interactional justice and satisfaction in coworker. The relationship between coworker interactional justice and coworker support was moderated by coworker commitment; for those rating coworker commitment low on the scale, justice was a stronger predictor of satisfaction with coworker than for those rating coworker commitment high on the scale. Similar results were shown for coworker workgroup-identification moderating coworker support mediating the relationship between justice from coworkers and satisfaction with coworkers. Workgroup identification with the supervisor moderated the relationship between supervisory distributive and interactional justice predicting OCB beneficial to the supervisor. Regression analyses also showed coworker and supervisory distributive and procedural justices inversely predicted turnover intentions from the organization. Recommendations for future research are discussed.

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Dedication

This dissertation is dedicated to Jonathan R. Byrne. His never-ending belief in me and continuous love and support provide me with an unparalleled source of energy.

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INTRODUCTION

Introduction

Perceptions of fairness in the workplace have consistently been shown to positively influence individuals' attitudes and behavior (for a review see Cropanzano & Greenberg, 1997). Recently, justice researchers have shown that individuals perceive fairness from a source. For example, Masterson, Lewis, Goldman, and Taylor (2000) showed that individual employees perceive fairness from either their supervisor or the organization. Using social exchange theory (Blau, 1964), these researchers suggested that in exchange for fair treatment from the supervisor, individuals reciprocated by performing citizenship behaviors beneficial to the supervisor and demonstrating higher levels of commitment towards the supervisor. Similarly, individuals perceiving fairness of procedures from the organization reciprocated with citizenship behaviors beneficial to the organization and organizational commitment. Other researchers have found similar results (Byrne & Cropanzano, 2000; Malatesta & Byrne, 1997).

Although this recent research is promising, it does not offer a complete picture of fairness processes in organizations since it fails to consider coworkers as a source of fairness. The prevalence of cross-functional teams, quality circles, and task forces in today's organizations, with an expected future increase in their use (Guzzo, 1995; Mohrman & Cohen, 1995), indicates that individuals may interact more with their team members than their supervisors. Research in management supports this notion and suggests that team members collaborate to develop

mechanisms for controlling their work group, and establishing group norms that become the locus of authority (Barker, 1993). In autonomous work teams where there is no formal authority or supervisor, team member relationships become increasingly critical to group performance (Wellins, Byham, & Wilson, 1991).

Because of the widespread use of teams and the importance of fairness perceptions in the workplace, this study examines fairness perceptions within teams. A framework of relationships based on the integration of social exchange theory and the relational model of justice was used to develop and test the following general hypothesis: the relationship between organizational justice from a source (team members, supervisor) and important workplace outcomes, is mediated by support from that source. Furthermore, identification with the source moderates the relationship between justice from that source and support from the source (see Figure 3).

Teams

One of the most dominant developments in organizations these days has been the establishment of team-based work systems (Townsend, DeMarie, & Hendrickson, 1998). Townsend and colleagues define team-based work systems as multiple groups of geographically or organizationally dispersed individuals joined together to accomplish a task. These team-based systems are expected to be more productive and more creative than individuals who work independently. In addition, the move of organizations towards flatter structures (Guzzo, 1995) gives rise to the increasing use of teams (Mohrman & Cohen, 1995) and team-based systems. In response to rapidly changing environments, organizations rely on an assortment of

teams: cross-functional, work groups, quality improvement teams, task forces, and autonomous teams (named *superteams* by Fortune Magazine in May 1990: Stoner, Freeman, & Gilbert, 1995; Mohrman & Cohen, 1995). These various teams appear to provide organizations with significant gains in productivity and enhance the ability to meet organizational goals (Townsend et al., 1998). Bishop, Scott, and Burroughs (2000) found that perceptions of team support led to team commitment, which led to job performance. These findings suggest that strong team member relations may result in greater job performance.

With the proliferation of teams, researchers have suggested that organizations strictly comprised of teams will dominate the organizational landscape (Mohrman, Cohen, & Mohrman, 1995). Team-based organizations are those with flat hierarchical structures that remove the need for various levels of individual managers. Mohrman et al. (1995) propose that as a result of team-based organizations, individuals will begin to view their organizational identity by the teams in which they are members; thus, removing distinctions between team identity and organizational identity. Mohrman and Cohen (1995) go so far as to say that the team will mediate an individual's relationship with the organization, and that the interaction with team members will affect individual behavior. Coworker relations become all the more important to understand, and therefore, are the focus of this study.

Hackman (1992) suggested that team membership or identification with the team defines an individual's work domain and limits the environment to which he or she is exposed. The team norms then determine how the individual is expected to

react, essentially influencing an individual's attitudes and behavior. In support of this proposition, Barker's (1993) ethnographic account of a company's move to self-managed teams shows that team members influenced other group members to shape their behavior according to established team norms. Several studies since the landmark Hawthorne studies have shown the powerful effects of groups on individual behavior (see Hackman's review, 1992). In aggregate, this research suggests that group membership is an important consideration when explaining and understanding organizational outcomes.

Other influences, in addition to team membership and coworker relations, have important effects on the attitudes and behaviors of individuals within organizations. Organizational justice researchers have long studied perceptions of fairness in the work place and how these perceptions affect individual behavior.

Organizational Justice

Research has consistently shown that judgments about what is fair, deserved, should have been, or just, are central to the attitudes individuals form on the job and behaviors they subsequently display. The focus of organizational justice research is on the experience or feelings of fairness, or (in)justice, and the consequences of these feelings. Justice researchers have typically distinguished between three types of justice. Distributive justice refers to the fairness of outcomes, such as pay (Deutsch, 1985). Procedural justice refers to the fairness of the procedure used to make decisions about who gets what outcomes (Folger & Greenberg, 1985), such as the process for deciding who gets the raise and the size of the pay raise. The third type of justice, interactional, refers to perceptions of the fairness of

interpersonal treatment received during the implementation of a procedure (Bies & Moag, 1986). For example, whether one is treated with dignity and respect while being told about how raises were decided is indicative of interactional justice.

Research has shown that each form of justice relates to various important organizational consequences such as affective commitment, pay satisfaction, or organizational citizenship behavior. It would appear that regardless of the form, organizational justice (in particular procedural justice) seems to have strong correlates to important outcomes (Byrne & Cropanzano, 2001). So why does justice matter so much? Two theories most frequently used to explain justice effects are social exchange theory (Blau, 1964) and the relational model of justice (Tyler & Lind, 1992).

Social Exchange Theory

Blau (1964) suggested that through mutual exchanges, a pattern of reciprocal obligation is established between two parties. One individual provides a beneficial service to another. Upon providing a benefit, the individual establishes an expectation of future return, although the exact nature and timing of that return is not stipulated in advance. The receiving individual then becomes obligated to reciprocate (Gouldner, 1960) with some voluntary beneficial service. As a result, individuals develop a commitment to fulfill their obligations and the pattern of reciprocity is reinforced. Blau emphasized that a social exchange was different from an economic exchange in that the social exchange involved unspecified obligations and the nature of the exchange was left to the discretion of the receiver. Thus, the timing and exact nature of the reciprocation were unknown, unlike an economic

exchange. Blau suggested that the social exchange relationship, therefore, promoted trust that the obligation would eventually be reciprocated. Over time, individuals regularly proving themselves trustworthy would develop deeper relationships that involved commitment, and feelings of gratitude. Additionally, this commitment would foster friendly helping behaviors, which would further provide reasons for maintaining the reciprocal relationship.

Empirical research has shown support for social exchange theory in explaining and predicting relationships between justice and beneficial work behaviors. For example, Moorman (1991) used social exchange theory to make predictions about justice and citizenship behaviors. Utilizing Organ's (1988) logic, Moorman argued that individuals receiving fair treatment viewed their relationship with the supervisor as a social exchange relationship. In exchange for this fair treatment, individuals reciprocated with citizenship behaviors. Since citizenship behaviors were not prescribed and were purely discretionary (Organ, 1988), they fit Blau's definition of what an individual might use to reciprocate. Moorman showed empirically that interactional justice indeed predicted organizational citizenship behaviors (OCB).

Sources of Fairness

Some recent research supports the idea that individuals perceive fairness originating from organizations, as well as from supervisors, and reciprocate with behaviors targeted to benefit the organization (or the source of fairness). Social exchange theory predicts this relationship, and recent research provides empirical support. Masterson et al. (2000) showed that individuals establish social exchange

relationships with their supervisors and their organization. In exchange for interactional justice from the supervisor, individuals reciprocated with citizenship behaviors beneficial to the supervisor (OCBS). Although this relationship was mediated by leader-member exchange (LMX), Masterson's results were consistent with Moorman's (1991). Furthermore, Masterson and colleagues found that procedural justice, understood as stemming from the organization, predicted OCB beneficial to the organization and organizational commitment. These relationships were mediated by perceived organizational support (POS).

In two field studies, Byrne and Cropanzano (2000) showed that employees perceive fair treatment in addition to fair procedures as stemming from both the organization and supervisor (see Figure 1). Perceptions of fairness originating at the organizational level predicted organizational level outcome variables such as organizational commitment and OCB beneficial to the organization. Fairness emanating from the supervisor predicted supervisory level outcomes such as supervisory commitment and OCB beneficial to the supervisor. These authors empirically showed that justice stemming from the organization only predicted organizational level outcomes, and that justice emanating from the supervisor only predicted supervisory level outcomes.

When using social exchange theory (Blau, 1964) to explain these findings, it could be said that individuals consider their relationship with their supervisor and with their organization when evaluating the source of fairness, and when determining the benefactor of the exchange. This social exchange explanation has been used in the commitment literature to explain supervisory commitment versus organizational

commitment (Becker, 1992; Malatesta & Tetrick, 1995), and team commitment versus organizational commitment (Bishop et al., 2000; Bishop & Scott, 2000). Taken together, the research suggests that individuals may perceive many forms of fairness from multiple sources, such as the supervisor, organization, and potentially others. Therefore, a logical extension of this research is the examination of team members as a source of fairness.

Mediator Variables

There is some empirical evidence within organizations that variables indicating the existence of a social relationship with the supervisor and organization mediate perceptions of organizational justice and organizational outcomes such as citizenship behaviors. Mediation suggests that an indirect relationship exists between fairness and citizenship behaviors. That is, organizational justice is related to citizenship behaviors only through its relationship to a third variable (see Figure 2, top). This model is consistent with predictions made using social exchange theory.

For example, Moorman (1999), Moorman, Blakely, and Niehoff (1998), and Masterson et al. (2000) showed that perceived organizational support fully mediated the relationship between procedural justice and citizenship behaviors. According to Moorman (1999), perceptions of organizational support signify to the individual that he or she is valued by the organization (e.g., a member of the group). Thus, Moorman concluded that unless the individual perceived organizational value (organizational support), the individual would not be motivated to reciprocate fairness (i.e., mediated relationship between fairness and organizational behavior). Masterson and colleagues (2000), using social exchange theory to form their

predictions, showed that leader-member-exchange fully mediated the relationship between justice perceptions from the supervisor and citizenship behavior beneficial to the supervisor.

Group-value/Relational Model

Tyler and Lind (1992) offer a different explanation for why people care about justice. Their group-value/relational model of justice says that procedural justice is based on an individual's concern about his or her status as a member of a group, and that procedural justice conveys information about that status. Procedural justice judgments, therefore, are based on a concern about the quality of relationships with authorities and group members. Lind and Tyler's (1988) group value model, later renamed the relational model of authority (Tyler & Lind, 1992), proposes that individuals' membership in a group provides them a sense of self-worth and identity, and that fair treatment by the supervisor leads to feelings of being valued. A procedure is seen as fair if it indicates a positive, full-status relationship with the authority figure (e.g., supervisor). To the extent that the procedure indicates the relationship is negative or that the individual is a low-status member of the group, the procedure is perceived as unfair (Tyler & Lind, 1992).

The importance of outcomes, according to the relational model, becomes secondary to the purpose of fair procedures providing status information. The relational model, according to Tyler and Lind (1992, p.143) focuses on "hierarchical organizations" in which the supervisor is necessary for communicating member status.

Lind (1995) stated that perceptions of procedural justice are influenced by three factors, termed relational factors: (1) status recognition, which is based on the quality of interpersonal treatment (e.g., with dignity and respect) an individual receives from the authority, (2) benevolence, which is perceived when the authority gives the impression of real consideration of an individual's views and attempts to "do the right thing" (Lind, 1995, p.87), and (3) the neutrality of the authority's decision-making process. These components seem somewhat similar on the surface to some of the dimensions of interpersonal treatment identified by Bies and colleagues (Bies & Moag, 1986; Folger & Bies, 1989; Tyler & Bies, 1990) that include integrity, suppression of personal biases, and justification. In general, it appears that the relational model suggests that individuals care about interpersonal treatment from their supervisor (i.e., Bies and Moag's interactional justice) because it conveys status information and indicates self-worth. Other authority figures may also influence individual perceptions. Tyler, Degoey, and Smith (1996) have shown that individuals can be influenced by any kind of authority figure, such as a parent, professor, or Congressional authority.

Identification As Moderator

According to the relational model, identification is a moderator of the relationship between fairness perceptions and outcomes. Recent research supports this proposition. For example, Huo, Smith, Tyler, and Lind (1996, p.42) show that individuals who identify with a superordinate group (e.g., "I am proud to think of myself as a member of the organization I work for") tended to rate their treatment by authority figures as more fair when evaluating the relational aspects of a conflict,

versus instrumental aspects or final outcomes. Thus, relational evaluations ("how honest was your supervisor," "how hard did your supervisor try to do the right thing," and "how politely were you treated by your supervisor": Huo et al.1996, p.42) seemed more important to individuals who strongly identified with the superordinate group (i.e., the organization) than to the weak identifiers, who appeared to focus more on the favorability of the outcome.

Brockner, Tyler, and Cooper-Schneider (1992), in a two-study paper, examined how people react to experiences with authorities. In their first study, they hypothesized moderating effects of layoff survivors' prior commitment to the organization on the relationship between perceptions of fairness of the layoff decision and change in commitment to the organization after the layoff. The results of the study supported their hypothesis. They found that those who were more highly committed before the layoff and who judged the layoff decision as fair, responded more positively to the layoff than those with weak prior commitment. That is, they showed little change in their commitment to the organization following the layoff. Those who were highly committed before the layoff and judged the layoff decision as unfair reacted more negatively to the layoff than all other groups. Thus, they lowered their ratings of organizational commitment after the layoff. In their second study, Brockner and colleagues examined individuals' change in level of support for legal authorities after encounters with police officers and judges. They found that prior commitment to the legal authorities moderated the relationship between fairness judgments of an encounter with authorities and subsequent support in law enforcement. Those with strong prior commitment to the legal

authorities, who experienced unfair treatment during an encounter with either police officers or judges, decreased their support for law enforcement the most. Brockner and colleagues showed that prior commitment moderated the relationship between fairness and reactions to authorities.

Taken together, these research findings seem to support the proposition that identification should moderate the relationship between fairness perceptions and organizational outcomes. Moderation suggests that the size of the relationship between fairness and specific outcomes depends on the level of identification (see Figure 2, bottom). For example, the strength of the relationship between coworker fairness and organizational citizenship behaviors towards team members will depend on the extent to which the individual identifies with the team. Although the research suggests that identification should moderate the relationship between fairness perceptions and organizational outcomes, the research is unclear as to which direction the form of interaction should take. Due to the lack of consistent operationalization of interactional justice and identification in prior research, no hypotheses were proposed for the nature of the interaction.

Integrating Social Exchange Theory and the Relational Model

Social exchange theory predicts that in exchange for fairness perceptions, individuals form mutually beneficial relationships with their supervisor and organization. To reciprocate fairness from supervisors and the organization, individuals perform citizenship behaviors and demonstrate commitment to their supervisors and organization. Research has shown much support for this model. The relational model suggests that individual members of the team will interpret fair

treatment, procedures, and rewards coming from team members as signs of identification with the team. The model further stipulates that this identification will moderate the relationship between fairness and organizational behaviors. Research supports this model, as well.

The research supports both models: a social exchange theory model and a relational theory model. The two models are similar in that they both describe the nature of justice relationships. Neither model contradicts the other, nor precludes the other from operating. When combined, the research suggests that both models can be integrated to form a new conceptualization of fairness (see Figure 3). This integrated model might be used to simultaneously explain relationships from both a social exchange and relational perspective.

Present Study

A new conceptual model (see Figure 3) was derived for predicting the nature of the relationship between justice and identification, and subsequent predictions for relevant outcomes. The purpose of this study was to determine if identification with a source (coworkers or supervisor) moderates the relationship between justice perceptions from a source (coworkers or supervisor) and relational variables, such as support from the source (coworkers or supervisor). Support should further fully mediate the relationship between fairness (interacting with identification) and important supervisory and coworker oriented outcomes. An explanation of relationships, one at a time, is presented to facilitate the understanding the new model shown in Figure 3. Consistent with prior justice research, organizational justice was the antecedent in the model. As indicated in prior sections of this paper,

procedural, interactional, and distributive justice have all been shown to predict important organizational outcomes. Since the core of this study involved justice, and the construct has been reviewed in detail earlier, it will not be reviewed again here.

Outcome Variables

Criterion variables included in this study were those found to be relevant to organizations: organizational citizenship behaviors beneficial to coworkers and the supervisor, job performance, satisfaction with the supervisor and coworkers, and turnover intentions.

Organizational citizenship behaviors. Organizational citizenship behavior (OCB), sometimes considered synonymous with extra-role or contextual performance (see Organ, 1997), has been defined as individual behavior that is discretionary in nature. It is not explicitly recognized in the formal appraisal or reward system. When all such similar behaviors are combined together over time and across persons, they contribute to and promote the effective functioning of the organization (Organ, 1988, 1997). Research supports a strong link between justice and OCB; it has frequently been examined and consistently shown to be a consequence of procedural justice (Folger & Konovsky, 1989; Konovsky & Pugh, 1994; Malatesta & Byrne, 1997; Masterson et al., 2000; Moorman, 1991; Niehoff & Moorman, 1993; Organ & Moorman, 1993; Podsakoff & MacKenzie, 1993; Tansky, 1993). Prior research has been shown that individuals target OCBs to benefit a particular source, supervisor (OCBS), or organization (OCBO), in exchange for fairness from that source, supervisor, or organization (Byrne & Cropanzano, 2000; Malatesta & Byrne, 1997; Masterson et al., 2000). In addition, this earlier research

has shown that OCBS and OCBO are distinct and independent constructs from citizenship behaviors targeted to benefit other individuals (OCBI). Based on prior research, it was expected that supervisory justice would predict OCB beneficial to the supervisor, as it has in recent studies. It was further hypothesized that:

H1: Fairness emanating from coworkers will positively relate to OCB beneficial to coworkers.

Job performance. It seems that the profitability of today's organizations is dependent on increasing and improving job performance. Job performance in justice research has sometimes been considered synonymous with Williams and Anderson's (1991) conceptualization of in-role behaviors (IRB). IRB has been shown to be a distinct and independent construct from citizenship behaviors targeted to benefit other individuals (OCBI) and citizenship behaviors beneficial to organizations (OCBO: Byrne & Cropanzano, 2000; Malatesta & Byrne, 1997). Other justice researchers have used combinations of ratings from prior performance appraisals and performance on objective quarterly goals (Konovsky & Cropanzano, 1991), in addition to IRB (Settoon, Bennett, & Liden, 1996). Fairness perceptions have consistently been shown to positively correlate and predict job performance, giving justification for attempts to improve fairness perceptions (Byrne & Cropanzano, 2000; Cropanzano, Prehar, & Chen, 1999; Gilliland, 1993; Konovsky & Folger, 1991). Therefore, given the consistency of prior findings showing a positive relationship between fairness and performance it was hypothesized that:

H2: Fairness emanating from coworkers will be positively related to supervisory ratings of individual team member's job performance.

Satisfaction. Job satisfaction and fairness have been linked in the justice research. Researchers have shown that higher levels of justice perceptions result in higher ratings of job satisfaction (Donovan, Drasgow, & Munson, 1998; Konovsky & Cropanzano, 1991; Sujak, 1997). Therefore, consistent with prior research it was hypothesized that:

H3: Fairness emanating from the coworker will be positively related to satisfaction with coworkers.

H4: Fairness emanating from the supervisor will be positively related to satisfaction with the supervisor.

Turnover intentions. Empirical evidence shows that justice perceptions are related to turnover intentions (Konovsky & Cropanzano, 1991). For example, Donovan and colleagues (1998) showed that perceptions of fair interpersonal treatment were negatively correlated with work withdrawal and job withdrawal. It was therefore hypothesized that:

H5: Perceived fairness from the supervisor will negatively predict turnover intentions from the organization and team.

H6: Perceived fairness from coworkers will negatively predict turnover intentions from the team, but not the organization.

Moderator Variables

Workgroup identification. Riordan and Weatherly (1999) refer to work group identification as the personal cognitive connection that an individual makes with his or her work group. They claim it is the perception of oneness with the group, and tendency to experience the group's successes and failures as one's own. Thus, the

authors propose that when an individual identifies with the group, he or she defines him or herself by the same traits as those that define the workgroup. Some research has shown that identification is distinct from commitment, but that some overlap exists (Mael & Tetrick, 1992).

Commitment. According to Meyer and Allen (1984) and Meyer (1997), organizational commitment has three components: affective orientation toward the organization (affective commitment), recognition of costs associated with leaving the organization (continuance commitment), and a moral obligation to remain with the organization (normative commitment). Affective commitment by itself has generally been used to measure organizational commitment. It refers to the strength of an individual's attachment, *identification*, and involvement in a particular organization (Mowday, Steers, & Porter, 1979). Supervisory commitment has recently been shown to relate to justice (Byrne & Cropanzano, 2000; Malatesta & Byrne, 1997). Given that identification is inherent in the definition of commitment and shares some conceptual overlap with the construct, commitment to the supervisor and team should be a strong indicator of identification with supervisor and coworkers, respectively. Although overlap exists, commitment seems to represent the affect of attachment in the relationship, whereas, workgroup identification represents a cognitive perception of the relationship. For this reason, both affective commitment and workgroup identification were used as measures of identification with a source.

Based on earlier research and the new conceptualization of fairness, it was hypothesized that:

H7: Identification with the supervisor will moderate the relationship between justice emanating from the supervisor and perceived support from the supervisor.

H8: Identification with the team will moderate the relationship between justice emanating from coworkers and perceived support from coworkers.

Mediators Between Justice and Criteria

Research has shown that organizational support is an important consideration in understanding the relationship between organizational justice and important work attitudes and behaviors, such as OCB, satisfaction, and performance. As a result, it seems logical to include support in this study. Many researchers have treated support as an antecedent to the same outcome variables that justice seems to predict. For example, support seems to predict some types of OCB (Shore & Shore, 1995).

According to Eisenberger, Huntington, Hutchinson, and Sowa (1986), an employee's sense of commitment to the organization is influenced by his or her perception of the employer's commitment to him or her. These authors define organizational support as the degree to which individuals feel the organization values their contributions and generally cares about them. Eisenberger et al. (1986) developed the Survey of Perceived Organizational Support (SPOS) to measure the extent to which individuals felt the organization was committed to them and thus provided support. For example, respondents answer questions that ask the extent to which the organization values their contribution, well-being, or opinions. Masterson et al. (2000) found that perceived organizational support (POS) mediated the relationship between procedural justice and OCBO.

Similarly, Moorman (1999) found that POS fully mediated the relationship between procedural justice and OCBs, and that a fully mediated model was better than a partially mediated model. Moreover, support has been shown to predict a wide array of helpful work behaviors such as job performance and OCBs (Armeli, Eisenberger, Fasolo, & Lynch, 1998; Eisenberger, Fasolo, & Davis-LaMastro, 1990; Randall, Cropanzano, Bormann, & Birjulin, 1999). Similarly, perceived supervisory support (PSS; Kottke & Sharafinski, 1988) indicates support from the supervisor. Taken together, these findings lead to the conclusion that support mediates the relationship between organizational justice and workplace attitudes and behaviors (see Figure 3). While the POS relationship has already been shown to mediate the relationship between organizational level justice and organizational citizenship behaviors, the PSS and coworker support relationships have not been tested. Given these earlier research findings on the relationship between support and fairness, and the new integrated model of justice, it was hypothesized that:

H9a: Perceived supervisory support will fully mediate the relationship between justice emanating from the supervisor interacting with supervisory identification, and OCB beneficial to the supervisor.

H9b: Perceived supervisory support will fully mediate the relationship between supervisory justice interacting with supervisory identification, and satisfaction with the supervisor.

H10a: Perceived coworker support will fully mediate the relationship between justice emanating from coworkers interacting with team identification, and OCB beneficial to coworkers.

H10b: Perceived coworker support will fully mediate the relationship between justice emanating from coworkers interacting with team identification, and satisfaction with coworkers.

H10c: Perceived coworker support will fully mediate the relationship between justice emanating from coworkers interacting with team identification, and supervisory ratings of job performance.

Summary of Hypotheses

It was generally hypothesized that identification with a source would moderate the relationship between justice perceptions from that source and support from that source, and that support would fully mediate the relationship between justice interacting with identification and outcomes. Therefore, the following specific hypotheses were proposed:

H1: Fairness emanating from coworkers will positively relate to OCB beneficial to coworkers.

H2: Fairness emanating from coworkers will positively relate to ratings of job performance.

H3: Fairness emanating from the coworker will be positively related to satisfaction with coworkers.

H4: Fairness emanating from the supervisor will be positively related to satisfaction with the supervisor.

H5: Perceived fairness from the supervisor will negatively predict turnover intentions from the team and organization.

H6: Perceived fairness from coworkers will negatively predict turnover intentions from the team, but not the organization.

H7: Identification with the supervisor will moderate the relationship between justice emanating from the supervisor and perceived support from the supervisor.

H8: Identification with the team will moderate the relationship between justice emanating from coworkers and perceived support from coworkers.

H9a: Perceived supervisory support will fully mediate the relationship between justice emanating from the supervisor interacting with supervisory identification, and OCB beneficial to the supervisor.

H9b: Perceived supervisory support will fully mediate the relationship between supervisory justice interacting with supervisory identification, and satisfaction with the supervisor.

H10a: Perceived coworker support will fully mediate the relationship between justice emanating from coworkers interacting with team identification, and OCB beneficial to coworkers.

H10b: Perceived coworker support will fully mediate the relationship between justice emanating from coworkers interacting with team identification, and satisfaction with coworkers.

H10c: Perceived coworker support will fully mediate the relationship between justice emanating from coworkers interacting with team identification, and supervisory ratings of job performance.

Method

Participants

A total of 232 participants completed surveys, however, only 177 had matched supervisory ratings. Therefore, analyses were conducted on 177 subordinate-supervisor dyads from three organizations within three different companies across the United States. Power analysis for partial correlation and regression coefficients (Cohen & Cohen, 1983) revealed that a final sample of approximately 168 was necessary for detecting a change in R^2 of .02 for each of three independent variables at a power level of .80 with a significance level of .05. Therefore, the total sample of 177 seemed adequate for this study.

The first organization supplied 38 matched dyads (35% response rate), the second organization supplied 73 matched dyads (66% response rate), and the third organization supplied 66 matched dyads (69% response rate). Each organization identified itself as operating in the high-technology industry, employees surveyed worked exclusively in established teams, and formal chains of command where supervisors were responsible for performance appraisals existed within each company. Participation was voluntary. Comparisons between participants and non-participants were not possible in any of the three organizations. Results from analyses of variance revealed no significant differences on the variables of the study between the three samples. Therefore, the three samples were combined and all further analyses conducted on the sample of 177 cases.

For the three organizations combined, 28 percent of participants indicated their age to be between 20 and 35 years of age, 46 percent between 36 and 50 years, 24 percent between 51 and 65 years of age, and the remainder chose not to indicate their age group. Age was divided into three groups based on suggestions from the organizations. Approximately 64 percent were female and 33 percent male, with three percent choosing not to indicate their gender. Approximately 80 percent of participants identified themselves as Caucasian, eight percent Latino/Hispanic, three percent Asian/Indian/Island Pacific, two percent African American, and the remaining seven percent did not identify their ethnicity. The size of teams in which individual employees worked varied. There were approximately nine percent each in teams of two or seven members, 12 percent each in teams with three, four, five, and six members, 20 percent indicated their team was comprised of 8-11 members, and 15 percent with 12-16 team members.

Data Collection

Questionnaires were made available in an electronic format to employees, both subordinates and supervisors. The electronic survey facilitated the ability to collect data from all three participating companies in parallel, and provided the greatest confidentiality. Participants created their own identification numbers, a combination of birth date and phone number, when completing their surveys. If they chose, participants offered permission for their supervisors to rate their performance and citizenship behaviors by completing an electronic form that generated an email message to the researcher. Upon receiving the permission request, the researcher used the participant's identification number to create a new unique identification

number. This new number was given to the supervisor to rate the individual on OCB beneficial to the coworkers, supervisor, and on job performance. Therefore, supervisors completed an electronic version of the OCB rating form for each subordinate who gave permission to be rated. All permission forms were destroyed once the new numbers were created. A cover letter describing the study, assuring confidentiality of the information, explaining the voluntary nature of the study, describing the supervisory rating form, and providing information about individuals to contact for details was made available to each employee (Appendix D). Supervisors received a cover letter along with access to an electronic version of the supervisory rating form (i.e., rate the employee on OCB and IRB).

Measures

All employees (both supervisors and individual employees) completed scales measuring perceptions of procedural, interactional, and distributive justice from the supervisory and coworker, for a total of six justice scales. In addition, the following measures were included on every employee survey: supervisory and team commitment; identification with the supervisor and team; perceived supervisory and coworker support; turnover intentions from both the group and organization; and satisfaction with coworkers and supervisor (shown in Appendix A). Supervisors rated permission-granting subordinates on organizational citizenship behavior beneficial to the supervisor and coworkers, and in-role behavior (Shown in Appendix C). Demographics included age, gender, ethnicity, and team size (Shown in Appendix B).

Procedural Justice

Procedural justice with the supervisor as the source was measured using two items from Byrne and Cropanzano (2000), and six items from Colquitt (in press). Example items include "I feel the procedures have been free of bias," and "Where I work, my supervisors' procedures are very fair." The coefficient alpha reliability estimate achieved in this study was .94. Seven items from Colquitt's (in press) procedural justice scale were used to measure coworker procedural justice. The coefficient alpha reliability estimate achieved in this study was .93. Factor analyses on both supervisory and coworker procedural justice showed support for each justice loading on factors independent from all other measures in the study. Both supervisory and coworker procedural justice were measured along a seven-point scale ranging from (1) Strongly Disagree to (7) Strongly Agree.

Interactional Justice

Interactional justice from the supervisor was measured using five items from Byrne & Cropanzano (2000). Examples on the supervisory interactional justice scale are "My supervisor always explains decisions to me," and "I feel my supervisor holds me in high regard." The coefficient alpha reliability estimate achieved in this study was .91. Interactional justice from coworkers was measured using four items from Colquitt (in press). Example items include "My coworkers refrain from making improper remarks or comments to me," and "My coworkers treat me with respect." The coefficient alpha reliability estimate obtained for this scale was .88. Factor analyses on both supervisory and coworker interactional justice showed support for each justice loading on factors independent from all other measures in the study.

Both supervisory and coworker interactional justice were measured along a seven-point scale ranging from (1) Strongly Disagree to (7) Strongly Agree.

Distributive Justice

Three items measuring distributive justice with the supervisor as focus were taken from a modified version of Colquitt (in press). An example item is "The recognition I receive is appropriate for the work I have completed." The coefficient alpha reliability estimate achieved in this study was .95. Coworker distributive justice was measured using the same three items from Colquitt, with "coworker" replacing instances of "organization." The coefficient alpha reliability estimate obtained for this scale was .95. Factor analyses on both supervisory and coworker distributive justice showed support for each justice loading on independent factors from all other measures in the study. Both supervisory and coworker distributive justice were measured along a seven-point scale ranging from (1) Strongly Disagree to (7) Strongly Agree.

Identification

Two measures were used to indicate perceptions of identification with either the coworker or supervisor: commitment and workgroup identification (henceforth called WG-identification).

Commitment. Affective supervisory commitment was measured using five items from Allen and Meyer's (1997) Affective Commitment Scale (ACS) that were modified by replacing instances of "organization" with "supervisor." Prior research used this similar procedure (Byrne & Cropanzano, 2000; Malatesta & Byrne, 1997; Millward & Hopkins, 1998). Because the inclusion of measures of WG-identification

and commitment in the same study does not appear to have been done before, exploratory factor analyses (EFA) were run to check for potential overlap between the two scales. EFA revealed that only five of the seven items from the ACS loaded (factor loading over .40: Stevens, 1996) on commitment and not on WG-identification as well. Therefore, only those five items were used to form scale scores for supervisory commitment. Sample items include "I do not feel emotionally attached to my supervisor" (reverse coded), and "My supervisor has a great deal of personal meaning to me." The coefficient alpha reliability estimate obtained for this scale was .77. Commitment to coworkers was measured using all seven ACS items that were modified to refer to "coworkers" instead of "supervisor." EFA showed that all seven modified ACS items loaded on a single factor for coworker commitment. The coefficient alpha reliability estimate obtained for this scale was .84. Responses to items ranged from (1) Strongly Disagree and (7) Strongly Agree.

Workgroup identification. WG-identification with the team was measured using all items from Riordan and Weatherly's (1999) five-item scale of workgroup identification. A sample item from the scale says, "It is important to me that my team is successful." EFA showed, however, that only three of the five items from Riordan and Weatherly's original workgroup identification scale loaded (factor loading over .40: Stevens, 1996) on WG-identification and not on commitment as well. Therefore, only these three items were used to produce a scale score for WG-identification with team members. The coefficient alpha reliability estimate obtained for this three-item scale was .76. Four items from Riordan and Weatherly's scale were modified to measure WG-identification with the supervisor, however instances of "work group"

were replaced with "supervisor." EFA results showed these items loading on a single factor. One item was not used (e.g., "It is important to me that I am a member of my work group") because it was not appropriate for measuring WG-identification with the supervisor. A sample item from the supervisor WG-identification scale includes "It is important to me that others think highly of my supervisor." The coefficient alpha reliability estimate obtained for this scale was .86. Responses to items ranged from (1) Strongly Disagree and (7) Strongly Agree.

Perceived Support

Supervisory support was measured using six items from a recently developed short eight-item version of the Survey of Perceived Organizational Support (SPOS: Eisenberger, Cummins, Armeli, & Lynch, 1997). Because two of the eight items appeared so similar to interactional justice items, these two were replaced with items from an earlier short version of the SPOS (Eisenberger, Huntington, Hutchinson, & Sowa, 1986). The word "supervisor" replaced every instance of "organization" in all the items. Given the similarity of some SPOS items to supervisory interactional justice items, and since measures of both perceived supervisory support and supervisory justices have not appeared in a single study before, EFA were run to check for item overlap. Unfortunately, EFA revealed that for the participants in this study, perceived supervisory support and interactional justice from the supervisor were indistinguishable. Factor loadings were in the .6 to .8 range for every item on both scales, leaving no possibility of separating perceived supervisory support from supervisory interactional justice. Therefore, all analyses using perceived supervisory support were dropped from this study. As a result, Hypotheses 7, 9a,

and 9b were not tested. Since the new model could not be tested for the supervisory level variables due to the lack of perceived supervisory support, two new *a priori* hypotheses were proposed. It was hypothesized that:

H11: Identification with the supervisor will moderate the relationship between justice emanating from the supervisor and satisfaction with supervisor.

H12: Identification with the supervisor will moderate the relationship between justice emanating from the supervisor and OCB beneficial to supervisor.

The modified SPOS scale was used to measure coworker support (PCWS) except the word "coworker" was substituted for "supervisor." Factor analysis revealed that five of the eight items loaded on perceived coworker support separate from coworker interactional justice, and from coworker WG-identification. Therefore, the coworker support scale was retained and analyses were conducted for hypotheses using coworker support. The high correlation between distributive coworker justice and perceived coworker support ($r=.72$, $p<.01$) warranted a check of the factors to ensure they were indeed separate. Factor analyses on coworker procedural, interactional, and distributive justices, and perceived coworker support provided evidence for each measure loading on independent factors. The coefficient alpha reliability estimate obtained for the perceived coworker support scale was .91. Responses to items on the scale ranged from (1) Strongly Disagree and (7) Strongly Agree.

Organizational Citizenship Behaviors

Supervisory ratings of organizational citizenship behavior beneficial to the supervisor (OCBS) were assessed by a five-item scale based on items from

Williams and Anderson's (1991) OCBI scale, and as used in prior research (Malatesta, 1995; Malatesta & Byrne, 1997; Masterson et al., 2000; Settoon et al., 1996). Example questions from the OCBS scale are "Helps you when you have a heavy work load," and "assists you with your work (when not asked)." The coefficient alpha reliability estimate obtained for this scale was .87. Citizenship behaviors beneficial to coworkers (OCBCW) were assessed using the OCBI scale (Williams & Anderson, 1991). The scale items are shown in Appendix C. The coefficient alpha reliability estimate obtained in this study for this scale was .91. Results of factor analyses supported the use of OCBS and OCBCW as separate factors. Responses to items on both the OCBS and OCBCW ranged from (1) Never to (5) Always.

Job Performance

Similar to prior research (e.g., Settoon et al., 1996), job performance was measured using supervisory ratings of seven items from Williams and Anderson's (1991) in-role behaviors (IRB) scale, shown to measure a distinct and independent construct from OCBI and OCBS. Factor analyses confirmed the distinctness of IRB for this sample. Sample items from the IRB scale include, "Adequately completes assigned duties," and "Fulfills responsibilities specified in job description." This scale appears in Appendix C on the Supervisory Observations Survey. The coefficient alpha reliability estimate obtained in this study for this scale was .87. Responses to items ranged from (1) Never to (5) Always.

Satisfaction

Satisfaction with the supervisor and coworkers were measured using items developed for this study. Items appear in Appendix A. Factor analyses revealed that satisfaction with the supervisor was a distinct factor from satisfaction with coworkers, and from other measures in the study. The coefficient alpha reliability estimates obtained in this study for the supervisor satisfaction scale was .78 and satisfaction with coworkers was .82. Responses were on a five-point likert scale ranging from (1) Very Satisfied to (5) Very Dissatisfied.

Turnover Intentions

Items developed for this study were used to measure turnover intentions from both the work group and organization. The items are shown in Appendix A. EFA revealed that the two turnover scales developed for this study were indistinguishable from one another. Therefore, they were combined into one scale measuring turnover intentions. As a result, Hypothesis 6 was not fully tested in this study. The coefficient alpha reliability estimate obtained in this study was .86. Responses were on a seven-point likert scale ranging from (1) Strongly Disagree to (7) Strongly Agree.

Data Analyses

Mediators and moderators can be differentiated diagrammatically (see Figure 2). If the predictor is associated with the outcome, but only via a third variable, then the third variable mediates the relationship between the predictor and outcome. If the predictor is associated with the outcome, but the strength of this relationship varies because of a third variable, then the third variable is said to moderate the relationship between the predictor and the outcome. Multiple regression analyses

using procedures described by Baron and Kenny (1986) were used to examine the data for mediation and moderation effects, as well as mediated moderated effects as proposed by the new model of justice developed in this study.

Mediation

To test for mediation, three separate regression equations were estimated 1) the mediator was regressed on the independent variable, 2) the dependent variable was regressed on the independent variable, and 3) the dependent variable was regressed on both the mediator and the independent variable. In order for mediation to be supported, the following conditions must be met: 1) the first regression equation must be significant, 2) the second regression equation must be significant, and 3) the mediator must affect the dependent variable in the third regression equation. Additionally in the third regression equation, the independent variable's affect on criterion variables must become non-significant if a conclusion of full mediation is to be drawn. If the effect of the independent variable on criterion variables remains significant in the third regression equation, the standardized beta coefficient of the independent variable must be less than in the second regression equation to be considered partial mediation. In the case of partial mediation, Olkin and Finn's (1995) formula to determine the statistical significance of the decrease in the size of the beta coefficient was applied.

Moderation

To test for moderation, three equations were simultaneously entered into the regression analysis in the following order: 1) regress the dependent variable on the independent variable, 2) regress the dependent variable on the moderator, and 3)

regress the dependent variable on the product of the moderator and independent variable. Moderation effects were shown if the third regression equation and the change in R^2 were significant.

Interpreting the interaction. To assess the form of a significant interaction a median split was performed on the moderator variable, within the scale range used by participants, to create two subgroups. For each subgroup (e.g., high commitment, low commitment), correlations and regression coefficients were obtained between the independent variables with which the moderator showed significant interaction and the dependent variable. To determine whether the degree (strength) of the relationship between the independent and dependent variables was equal for each subgroup, a comparison of the correlation coefficients was conducted. Given a significant difference, it was determined that the strength of the relationship differed across subgroups. Arnold (1982) suggests that to determine the form (slope) of the interaction, the dependent variable must be regressed upon the independent variable resulting in individual regression equations for each subgroup. A comparison between regression coefficients for the two groups is then suggested (Arnold, 1982). However, this comparison test is identical to the t-test for the significance of the regression coefficient for the interaction term of the overall hierarchical regression (Aiken & West, 1991). Therefore, the significance of the regression coefficient of the interaction term in the overall hierarchical regression was used as an indicator of whether the two regression coefficients statistically differed from one another.

Control Variables in Regression Analyses

The primary focus of this study was on whether support and identification moderated justice relations with criterion variables. Therefore, relationships between age, gender, team size, and criterion variables were considered confounds to the results of interest. Demographic variables that were correlated with outcome variables were used as control variables in the regression equations.

Results

Table 1 shows the means and standard deviations for the variables in this study. Table 2 shows the intercorrelations and reliability estimates for all the variables. Reliability estimates were all greater than .70, which is within an acceptable range for research purposes (Nunnally & Bernstein, 1994).

Coworker as Source of Justice

OCB coworkers. An examination of correlation coefficients in Table 2 reveals partial support for Hypothesis 1. Coworker procedural justice was significantly positively correlated with supervisory ratings of OCB beneficial to coworkers ($r=.18$, $p<.05$, $r^2=.03$). Neither distributive nor interactional justice from coworkers significantly correlated with OCB beneficial to coworkers (OCBCW), indicating only partial support for Hypothesis 1.

Job performance. Shown in Table 2, coworker procedural justice was significantly correlated with supervisory ratings of job performance ($r=.20$, $p<.01$, $r^2=.04$), coworker interactional justice was significantly correlated with supervisory ratings of job performance ($r=.13$, $p<.05$, $r^2=.02$), and coworker distributive justice was significantly correlated with supervisory ratings of job performance ($r=.15$, $p<.05$, $r^2=.02$). These significant correlations provide support for Hypothesis 2.

Satisfaction with coworkers. Support for Hypothesis 3 is shown in Table 2 in the significant correlation between coworker interactional justice and satisfaction with coworkers ($r=.65$, $p<.01$, $r^2=.42$), coworker procedural justice and satisfaction in coworker ($r=.64$, $p<.01$, $r^2=.41$), and coworker distributive justice and satisfaction in coworker ($r=.59$, $p<.01$, $r^2=.35$).

Turnover intentions. Shown in Table 3, a significant negative regression coefficient was found for coworker distributive justice predicting turnover intentions ($\beta = -.34$, $p<.01$), after controlling for the significant effects of team size. Coworker procedural justice did not significantly predict turnover intentions ($\beta = -.25$, $p<.10$), nor did coworker interactional justice significantly predict turnover intentions ($\beta = .12$, $p>.10$). Therefore, these findings show only partial support for Hypothesis 6. Since turnover intentions from the team and turnover intentions from the organization could not be measured separately in this study, Hypothesis 6 could not be fully tested. The addition of coworker distributive justice into the regression equation added an incremental R^2 change of 21% to the model, beyond the effects of team size.

Commitment Moderating Coworker Justice

Shown in Table 5, coworker commitment moderated the relationship between coworker interactional justice and perceived coworker support ($\beta = -1.04$, $p<.01$), and coworker distributive justice and perceived coworker support ($\beta = .77$, $p<.05$). Coworker commitment significantly moderated the relationship between coworker procedural justice and perceived coworker support, at the .10 significance level ($\beta = -.57$, $p<.10$). These results partially support Hypothesis 8, which states that

identification with the team will moderate the relationship between justice emanating from coworkers and perceived support from coworkers.

Interpreting interactions: justice predicting support. Analyses showed that for the high commitment subgroup, the correlation between coworker interactional justice and coworker support ($r=.31$, $p<.05$) was significantly lower than the correlation between coworker interactional justice and coworker support ($r=.78$, $p<.05$) for the low coworker commitment subgroup. Stated in another way, when participants rated their coworker commitment lower on the scale, the correlation between coworker interactional justice and coworker support was higher. The results of subgroup regression analysis indicated that the nature of the relationship between coworker interactional justice and coworker support varies with the values of coworker commitment. Stated differently, a change in coworker interactional justice for the low commitment subgroup ($\beta = .44$, $p<.05$) made a bigger score difference in coworker support than in the high commitment subgroup ($\beta = .16$, $p<.05$). For the high commitment subgroup, the correlation between coworker procedural justice and coworker support ($r=.29$, $p<.05$) was significantly lower than the correlation between coworker procedural justice and coworker support ($r=.72$, $p<.05$) for the low coworker commitment subgroup. The results of subgroup regression analysis indicated that for the low commitment subgroup a change in coworker procedural justice ($\beta = .21$, $p<.05$) predicted a score difference in coworker support, whereas for the low commitment subgroup no score change occurred in coworker support ($\beta = -.11$, $p>.10$). For the high commitment subgroup, the correlation between coworker distributive justice and coworker support ($r=.65$, $p<.05$)

was not significantly lower than the correlation between coworker distributive justice and coworker support ($r=.71$, $p<.05$) for the low coworker commitment subgroup. The results of subgroup regression analysis indicated that for the high commitment subgroup a change in coworker distributive justice ($\beta = .65$, $p<.05$) predicted a larger rating in coworker support than for the low commitment subgroup ($\beta = .32$, $p<.05$). Thus, although the strength of the relationship between coworker distributive justice and coworker support did not differ between the high and low commitment subgroups, the form of the interaction did differ between the high and low commitment subgroups.

Justice predicting OCBCW. Table 6 shows the results of mediated moderated regression analysis for coworker commitment moderating coworker justice perceptions, mediated by coworker support, predicting OCBCW. As shown in Table 6, coworker support failed to mediate the relationship between the interaction of coworker fairness and coworker commitment and OCBCW ($\beta = -.04$, $p>.10$). Therefore, Hypothesis 10a was not supported. This finding was anticipated due to the lack of significant correlation between perceived coworker support and OCBCW. Regression analyses were conducted to determine if coworker commitment moderated the relationship between coworker justice and OCBCW, without the mediating effects of coworker support. Significant moderation effects at the .10 level ($\Delta R^2 = .03$, $p<.10$) were found for coworker commitment and coworker procedural justice ($\beta = -1.60$, $p<.01$), and coworker commitment and coworker interactional justice ($\beta = .92$, $p<.10$) predicting OCBCW, as shown in Table 7.

Interpreting interactions: justice predicting OCBCW. For the high commitment subgroup, the correlation between coworker interactional justice and OCBCW (r=.14, p<.10) was not significantly different from the correlation between coworker interactional justice and OCBCW (r=.04, p>.10) for the low coworker commitment subgroup. The results of subgroup regression analysis indicated that for the high commitment subgroup a change in coworker interactional justice (β = .02, p>.10) did not predict a score difference in OCBCW. There also was no score change in OCBCW evident for the low commitment subgroup (β = .10, p>.10). The results of this interpretation suggest that coworker commitment does not moderate the relationship between coworker interactional justice and OCBCW. For the high commitment subgroup, the correlation between coworker procedural justice and OCBCW (r=.23, p<.05) was not significantly different from the correlation between coworker procedural justice and OCBCW (r=.16, p>.10) for the low coworker commitment subgroup. However, the results of subgroup regression analysis indicated that for the low commitment subgroup a change in coworker procedural justice (β = .29 p<.10) predicted a bigger score difference in OCBCW than for the low commitment subgroup (β = .21, p<.10).

Justice predicting satisfaction in coworker. Support for Hypothesis 10b is shown in Table 8. Results of mediated moderated regression analysis show perceived coworker support fully mediating the relationship between coworker interactional justice interacting with coworker commitment predicting satisfaction with coworker. Full mediation is shown by 1) the significance of the third regression equation (F(4,169)=57.61, p<.05), 2) the significant beta coefficient for perceived

coworker support (β = .42, p<.01), and 3) the change from significant to not significant beta coefficient of the interaction term for coworker interactional justice and coworker commitment (β =.29, p<.05 to β =.15, p>.10). The decrease in the beta coefficient for coworker interactional justice interacting with coworker commitment between step 2 and step 3 of the multiple regression analysis (β =.29, p<.05 to β =.15, p>.10).was analyzed using Olkin and Finn's (1995) formula (converted into a program by P. Chen). Results indicated that the decrease in the beta coefficient was significant at the .05 level. This additional test confirmed a conclusion of full mediation effects for perceived coworker support.

Justice predicting supervisory ratings of job performance. Table 9 shows lack of support for Hypothesis 10c. Perceived coworker support did not mediate the relationship between coworker commitment interacting with coworker interactional, procedural, and distributive justice, and supervisory ratings of job performance. Regression analyses were conducted to determine if coworker commitment moderated the relationship between coworker justice and supervisory ratings of job performance, without the mediating effects of coworker support. Moderation effects were not found for coworker commitment and coworker procedural justice (β = -1.03, p<.10), or for coworker distributive justice (β = .75, p<.10) predicting supervisory ratings of job performance, as shown in Table 10. The lack of a significant change in R^2 for the third regression equation (ΔR^2 = .03, p>.10) indicates that there were no moderation effects.

WG-Identification Moderating Coworker Justice

Shown in Table 11, coworker WG-identification moderated the relationship between coworker procedural justice and perceived coworker support (β = -1.57, p<.10), and coworker distributive justice and perceived coworker support (β = 2.66, p<.01), and as shown by the significant change in R^2 for the third regression equation (ΔR^2 = .02, p<.05). These results only partially support Hypothesis 8, since WG-identification with coworkers did not moderate the relationship between coworker interactional justice and perceived coworker support (β = -.94, p>.10).

Interpreting interactions: justice predicting support. To assess the form and degree of significant interactions a median split was performed on the moderator variable coworker WG-identification, within the scale range used by participants, to create two subgroups. For each subgroup (e.g., high WG-identification, low WG-identification), correlations and regression coefficients were obtained between the coworker justices with which coworker WG-identification showed significant interactions and perceived coworker support. These analyses showed that for the high WG-identification subgroup, the correlation between coworker procedural justice and coworker support (r=.62, p<.05) was not significantly different from the correlation between coworker procedural justice and coworker support (r=.67, p>.10) for the low coworker WG-identification subgroup. However, the results of subgroup regression analysis indicated that for the high WG-identification subgroup a change in coworker procedural justice (β = .09 p<.10) predicted a score difference in coworker support, while no change in score was evident for the low WG-identification subgroup (β = .36, p<.10). Analyses showed that for the high WG-

identification subgroup, the correlation between coworker distributive justice and coworker support (r=.71, p<.05) was not significantly different from the correlation between coworker distributive justice and coworker support (r=.57, p<.05) for the low coworker WG-identification subgroup. Subgroup regression analysis indicated that for the high WG-identification subgroup a change in coworker distributive justice (β = .48, p<.05) predicted a score difference in coworker support, while no change in score on coworker support was evident for the low WG-identification subgroup (β = .08, p<.10).

Justice predicting OCBCW. Failure to support Hypothesis 10a is shown in Table 12. Perceived coworker support failed to mediate the relationship between the interaction of coworker procedural, interactional, and distributive justices with coworker WG-identification, and OCB beneficial to coworkers (β = -.02, p>.10). This finding was anticipated due to the lack of significant correlation between perceived coworker support and OCBCW. Regression analyses were conducted to determine if coworker identification moderated the relationship between coworker justice and OCBCW, without the mediating effects of coworker support. As shown in Table 13, significant moderation at the .10 level (ΔR^2 = .03, p<.10) was found for coworker WG-identification and coworker interactional justice (β = 2.93, p<.05), and coworker WG-identification and coworker distributive justice (β = -2.37, p<.10), predicting OCB beneficial to coworker.

Interpreting interactions: justice predicting OCBCW. Using the same procedures as described earlier, analyses to assess the form and degree of interactions showed that for the high WG-identification subgroup the correlation

between coworker interactional justice and OCBCW (r=.10, p<.10) was not significantly different from the correlation between coworker interactional justice and OCBCW (r=.06, p>.10) for the low coworker identification subgroup. Subgroup regression analysis indicated that for the high WG-identification subgroup a change in coworker interactional justice (β = -.01, p>.10) did not result in a score difference in OCBCW, nor did a change in coworker interactional justice result in a score change in OCBCW for the low WG-identification subgroup (β = .35, p>.10). The results of these analyses suggest that WG-identification did not moderate the relationship between coworker interactional justice and OCBCW. A similar conclusion may be draw for WG-identification moderating the relationship between coworker distributive justice and OCBCW. For the high WG-identification subgroup the correlation between coworker distributive justice and OCBCW (r=.07, p>.10) was not significantly different from the correlation between coworker distributive justice and OCBCW (r=.55, p<.05) for the low coworker identification subgroup. Subgroup regression analysis indicated that for the high WG-identification subgroup a change in coworker distributive justice (β = -.04, p>.10) did not result in a score difference in OCBCW, nor did a change in coworker distributive justice result in a score change in OCBCW for the low WG-identification subgroup (β = .52, p>.10).

Justice predicting satisfaction in coworker. Table 14 shows additional support for Hypothesis 10b. Perceived coworker support fully mediated the relationship between coworker WG-identification interacting with coworker distributive justice predicting satisfaction with coworker. The decrease in beta coefficient for coworker distributive justice interacting with coworker WG-identification (β =.24, p<.01 to β

=.07, p>.10) between step 2 and step 3 of the multiple regression analysis shown in Table 14, was analyzed using Olkin and Finn's (1995) formula. Results indicated that the decrease in the beta coefficient was significant at the .05 level. Only partial mediation effects of coworker support were shown for coworker interactional and coworker procedural justice moderated by coworker identification. The decrease in beta coefficient for coworker interactional justice interacting with coworker WG-identification (β =.31, p<.01 to β =.19, p<.05) between step 2 and step 3 of the multiple regression analysis shown in Table 14, was significant at the .05 level. Therefore, partial mediation was supported. Likewise, the decrease in beta coefficient for coworker procedural justice interacting with coworker WG-identification (β =.26, p<.01 to β =.24, p<.01), between step 2 and step 3 of the multiple regression analysis shown in Table 14, was tested for significance. This decrease was also significant at the .05 level. Therefore, partial mediation of perceived coworker support on coworker WG-identification interacting with coworker procedural justice predicting satisfaction with coworker was statistically significant.

Justice predicting supervisory ratings of job performance. Lack of support for Hypothesis 10c is shown in Table 15. Perceived coworker support did not mediate the relationship between the interactions of coworker WG-identification with coworker distributive, procedural, or interactional justice predicting supervisory ratings of job performance. This lack of support is shown by the not significant regression equations and not significant beta coefficient for perceived coworker support (β =.06, p>.10). Regression analyses were conducted to determine if coworker WG-identification moderated the relationship between coworker justice

and supervisory ratings of job performance, without the mediating effects of coworker support. A significant change in R^2 (ΔR^2 = .05, p<.05) along with the significant third regression equation support a conclusion of moderation effects. Moderation effects were found for coworker WG-identification and coworker procedural justice (β = 3.98, p<.01) and coworker distributive justice (β = -2.04, p<.10) predicting supervisory ratings of job performance, as shown in Table 16.

Interpreting interactions: justice predicting job performance. Analyses to evaluate the form and degree of interactions showed that for the high WG-identification subgroup the correlation between coworker interactional justice and job performance (r=.16, p<.05) was not significantly different from the correlation between coworker interactional justice and job performance (r=-.27, p>.10) for the low coworker WG-identification subgroup. Subgroup regression analysis indicated that for the low WG-identification subgroup a change in coworker interactional justice (β = -.66, p<.05) resulted in a score difference in job performance, whereas a change in coworker interactional justice did not result in a score change in job performance for the high WG-identification subgroup (β = .05, p>.10). For the high WG-identification subgroup the correlation between coworker distributive justice and job performance (r=.12, p<.10) was not significantly different from the correlation between coworker distributive justice and job performance (r=.48, p<.10) for the low coworker WG-identification subgroup. Subgroup regression analysis indicated that for the low WG-identification subgroup a change in coworker distributive justice (β = .80, p<.05) predicted a score difference in job performance, whereas a change in coworker distributive justice did not predict a score change in job performance for

the high WG-identification subgroup (β = .004, p>.10). Stated differently, coworker distributive justice predicted job performance only when ratings of WG-identification were low.

Summary

Mediated moderated regression analyses showed partial support for the new conceptualization of justice. That is, identification with the coworker moderated the relationship between some forms of fairness emanating from the coworker and coworker support. This relationship between the interaction term (i.e., coworker identification and justice) and satisfaction with coworkers was further mediated by coworker support.

Supervisor as Source of Justice

Satisfaction with supervisor. Supervisory level interactional, procedural, and distributive justices were significantly correlated with satisfaction in the supervisor (r=.72, p<.01, r^2=.52; r=.66, p<.01, r^2=.44; r=.74, p<.01, r^2=.55, respectively), thus providing support for Hypothesis 4 (see Table 2).

Turnover intentions. As shown in Table 4, a significant negative regression coefficient was found for supervisory distributive justice predicting turnover intentions (β = -.27, p<.01), and supervisory procedural justice predicting turnover intentions (β = -.32, p<.01), after controlling for the significant effects of team size. Supervisory interactional justice did not significantly predict turnover intentions (β =.15, p<.10). These findings show partial support for Hypothesis 5. Hypothesis 5 could not be fully tested, however, because of the lack of separate indicators for turnover intentions from the team and turnover intentions from the organization. The addition

of supervisory distributive and procedural justice into the regression equation added an incremental R^2 change of 19% to the model, after controlling for the effects of team size.

Hypothesis 7, 9a, b, and c were dropped from the analyses due to the failure of perceived supervisory support to factor analyze into a scale separate from supervisory interactional justice.

Commitment Moderating Supervisory Justice

Hypothesis 11 and 12 were proposed as alternative hypothesis for examining the relationship between identification with the supervisor and organizational justice emanating from the supervisor.

Justice predicting OCB beneficial to supervisor. I posited *a prior* that identification with the supervisor would moderate the relationship between the three supervisory justices and OCB beneficial to the supervisor (i.e., Hypothesis 12). This additional hypothesis is in keeping with the purpose of the study, which was to determine if identification with a source moderated the relationship between justices and organizational outcomes. Shown in Table 17, regression analyses provided some evidence (ΔR^2=.04, p<.10) at the .10 level, that supervisory commitment moderated the relationship between supervisory interactional (β=1.82, p<.05) and supervisory procedural justices (β= -1.41, p<.05) predicting OCB beneficial to the supervisor (OCBS). Because supervisory commitment did not moderate the relationship between supervisory distributive justice and OCB beneficial to the supervisor, Hypothesis 12 was only partially supported. The significant interaction

terms added an additional 4% to the variance accounted for in OCB beneficial to the supervisor.

Interpreting interactions: justice predicting OCBS. To assess the form and degree of significant interactions a median split was performed on supervisory commitment, within the scale range used by participants, to create two subgroups. For each subgroup (e.g., high commitment, low commitment), correlations and regression coefficients were obtained between the supervisory justices with which supervisory commitment showed significant interaction and OCBS. Results from these analyses showed that for the low supervisory commitment subgroup the correlation between supervisory interactional justice and OCBS ($r=.17$, $p<.10$) was not significantly different from the correlation between supervisory interactional justice and OCBS ($r=.14$, $p<.10$) for the high supervisory commitment subgroup. Subgroup regression analyses indicated that for the low supervisory commitment subgroup a change in supervisory interactional justice ($\beta = -.01$, $p > .10$) did not result in a score difference in OCBS, nor did a change in supervisory interactional justice result in a score change in OCBS for the high supervisory commitment subgroup ($\beta = .14$, $p>.10$). These results imply that there was no moderation effect for supervisory commitment on supervisory interactional justice predicting OCBS. For the low supervisory commitment subgroup the correlation between supervisory procedural justice and OCBS ($r=.25$, $p<.05$) was not significantly different from the correlation between supervisory procedural justice and OCBS ($r=.01$, $p>.10$) for the high supervisory commitment subgroup. Subgroup regression analyses indicated that for the low supervisory commitment subgroup a change in supervisory

procedural justice (β = .33, p<.05) resulted in a score difference in OCBS, whereas a change in supervisory procedural justice did not result in a score change in OCBS for the high supervisory commitment subgroup (β = .11, p>.10).

Satisfaction with supervisor. Hypothesis 11 proposed that identification with the supervisor would moderate the relationship between supervisory justice and satisfaction with the supervisor. Table 18 shows partial support for Hypothesis 11 using supervisory commitment as the measure of identification. Supervisory commitment moderated the relationship between supervisory interactional justice and supervisory satisfaction (β= 1.57, p<.01), and supervisory procedural justice and supervisory satisfaction (β= -.98, p<.01). The lack of a significant moderation effects for supervisory commitment on the relationship between supervisory distributive justice and supervisory satisfaction prevents a conclusion of full support for Hypothesis 11.

Interpreting interactions: justice predicting satisfaction. Results from analyses conducted to assess the form and degree of the significant interactions revealed that for the low supervisory commitment subgroup the correlation between supervisory interactional justice and satisfaction with the supervisor (r=.68, p<.05) was not significantly different from the correlation between supervisory interactional justice and satisfaction with the supervisor (r=.66, p<.05) for the high supervisory commitment subgroup. Subgroup regression analyses indicated that for the low supervisory commitment subgroup a change in supervisory interactional justice (β =-.07, p >.10) did not result in a score difference in satisfaction with the supervisor, whereas a change in supervisory interactional justice did result in a score change in

satisfaction with the supervisor for the high supervisory commitment subgroup (β = .45, p>.10). For the low supervisory commitment subgroup the correlation between supervisory procedural justice and satisfaction with the supervisor (r=.76, p<.05) was significantly different at the .10 level from the correlation between supervisory procedural justice and satisfaction with the supervisor (r=.48, p<.05) for the high supervisory commitment subgroup. Subgroup regression analyses indicated that for the low supervisory commitment subgroup a change in supervisory procedural justice (β =.43, p<.05) resulted in a score difference in satisfaction with the supervisor, whereas for the high supervisory commitment subgroup a change in supervisory procedural justice (β = .04, p>.10) did not result in a score change in satisfaction with the supervisor.

WG-Identification Moderating Supervisory Justice

OCB beneficial to supervisor. Shown in Table 19, WG-identification with the supervisor showed significant moderation effects for supervisory interactional and procedural justice with OCB beneficial to the supervisor, after controlling for gender and two age groups. The significant interaction terms (β= 3.29, p<.01, β= -1.29, p<.10, respectively) added an additional 8% to the variance accounted for in OCB beneficial to the supervisor. These results provide partial support for Hypothesis 12, since the relationship between supervisory distributive justices with OCB beneficial to the supervisor was not moderated by supervisory WG-identification.

Interpreting interactions: justice predicting OCBS. Analyses showed that for the high supervisory WG-identification subgroup the correlation between supervisory interactional justice and OCBS (r=.29, p<.05) was no different from the correlation

between supervisory justice and OCBS (r=.21, p<.10) for the low supervisory WG-identification subgroup. Subgroup regression analyses indicated that for the low supervisory WG-identification subgroup a change in supervisory interactional justice (β =-.03, p <.10) did not result in a score difference in OCBS, whereas a change in supervisory interactional justice did result in a score change in OCBS for the high supervisory WG-identification subgroup (β = .34, p<.05). For the low supervisory WG-identification subgroup the correlation between supervisory procedural justice and OCBS (r=.25, p<.05) was not significantly different from the correlation between supervisory procedural justice and OCBS (r=.08, p>.10) for the high supervisory WG-identification subgroup. Subgroup regression analyses indicated that for the low supervisory WG-identification subgroup a change in supervisory procedural justice (β =.16, p>.10) did not result in a score difference in OCBS, nor for the high supervisory WG-identification subgroup did a change in supervisory procedural justice (β = -.09, p>.10) result in a score change in OCBS. These results suggest that supervisory WG-identification did not moderate the relationship between supervisory procedural justice and OCBS.

Satisfaction with supervisor. Table 20 shows the results of regression analyses that provide partial support for Hypothesis 11. After controlling for gender and two age groups, WG-identification with the supervisor moderated the relationship between supervisory interactional justice and satisfaction with the supervisor (β=1.87, p<.01), and supervisory procedural justice and satisfaction with the supervisor (β= -1.72, p<.01). These significant interactions added an additional 4% to the variance accounted for in satisfaction with the supervisor. The lack of

supervisory commitment moderating the relationship between supervisory distributive justice and satisfaction with the supervisor resulted in only partial support for Hypothesis 11.

Interpreting interactions: justice predicting satisfaction. Results from analyses conducted to examine the form and degree of the significant interactions revealed that for the low supervisory WG-identification subgroup the correlation between supervisory interactional justice and satisfaction with the supervisor ($r=.72$, $p<.05$) was not significantly different from the correlation between supervisory interactional justice and satisfaction with the supervisor ($r=.64$, $p<.05$) for the high supervisory WG-identification subgroup. Subgroup regression analyses indicated that for the low supervisory WG-identification subgroup a change in supervisory interactional justice ($\beta = .19$, $p < .10$) resulted in a significantly smaller score change in satisfaction with the supervisor than for the high supervisory WG-identification subgroup ($\beta = .45$, $p>.10$). For the low supervisory WG-identification subgroup the correlation between supervisory procedural justice and satisfaction with the supervisor ($r=.73$, $p<.05$) was not significantly different from the correlation between supervisory procedural justice and satisfaction with the supervisor ($r=.48$, $p<.05$) for the high supervisory WG-identification subgroup. Subgroup regression analyses indicated that for the low supervisory WG-identification subgroup a change in supervisory procedural justice ($\beta = .33$, $p<.05$) resulted in a score difference in satisfaction with the supervisor, whereas for the high supervisory WG-identification subgroup a change in supervisory procedural justice ($\beta = -.02$, $p>.10$) did not result in a score change in satisfaction with the supervisor.

Summary

Regression analyses showed partial support for supervisory identification with the supervisor moderating the relationship between justice emanating from the supervisor and OCB beneficial to the supervisor, and satisfaction with the supervisor.

Discussion

The main purpose of this study was to determine if identification with a team or supervisor moderated the relationship between justice perceptions and important supervisory and team oriented outcomes. It was expected that the relationship between justice and outcomes would be fully mediated by support from the supervisor or team members. In addition, hypotheses were posited regarding the relationships between interactional, procedural, and distributive justice with coworker and supervisor as foci and organizational outcomes such as turnover intentions from the organization, and satisfaction with coworkers and supervisor.

Coworker Justice

Results of analyses showed support for the hypothesized conceptualization of perceptions of fairness emanating from coworkers. Participants did perceive fairness from coworkers, which heretofore has not been shown. Coworker interactional and procedural fairness were stronger predictors of coworker support when coworker commitment was rated low, as compared to when coworker commitment was rated high. In addition, a change in coworker interactional and procedural justice resulted in larger changes in coworker support ratings when commitment was low as compared to when commitment was high. Distributive

justice emanating from coworkers resulted in an opposite pattern for rate of change in coworker support. A change in coworker distributive justice resulted in a larger change in coworker support when coworker commitment was high, as compared to when it was low. This same rate of change pattern held for coworker WG-identification interacting with coworker procedural and distributive justice. When WG-identification was rated higher on the scale, a change in procedural and distributive justice resulted in larger changes in coworker support.

Furthermore, coworker support was shown to be necessary for this interaction between identification and interactional fairness to predict satisfaction with coworkers. This finding is consistent with earlier research showing that support mediates the relationship between fairness and organizational outcomes (Moorman, 1991). Together, the interaction and the requirement of coworker support indicate that the new conceptualization of coworker fairness, as put forth in this study, can be used as a viable explanation for how interactional and procedural fairness emanating from coworkers predicts individual team member satisfaction with coworkers.

Results did not provide the same findings for procedural or distributive justice from coworkers predicting satisfaction with coworkers. Coworker support was not necessary for procedural and distributive justice from coworkers to predict satisfaction with coworker. This lack of significant findings could be taken to indicate that coworker support is not necessary for coworker procedural and distributive fairness interacting with identification to affect satisfaction with coworkers.

The hypothesized model was not supported for OCB beneficial to coworkers or supervisory ratings of job performance as criterion variables. This finding was anticipated for OCB beneficial to coworkers since there was no significant correlation between coworker support and OCB beneficial to coworkers. Additional analyses were conducted to examine the relationship between coworker justice and OCB beneficial to coworker without support as a mediator. These results failed to show strong support for justice interacting with identification predicting OCB beneficial to coworkers. Similarly, a significant relationship between the interaction of coworker justice and commitment predicting job performance was not forthcoming. Although the relationship was supported for WG-identification interacting with coworker interactional justice, the effect size was small. Together, these findings suggest that coworker justice interacting with identification may not be a predictor of OCB beneficial to coworkers or supervisory ratings of job performance. Perhaps team members did not look toward fairness emanating from coworkers when determining to what degree they will show beneficial behaviors, or increase or decrease their rate of performance. Future research should examine what other aspects of relationships might affect their desire to perform.

Regression analyses also showed that coworker distributive justice and coworker procedural justice inversely predicted turnover intentions from the organization. Coworker interactional justice was not a predictor of turnover intentions. This finding indicates that when individual team members consider leaving, they attend to the result of allocation decisions and the distribution of recognition within the team.

Supervisory Justice

Because of limitations with measures of supervisory support, the hypothesized model could not be fully tested for supervisory justice, supervisory WG-identification and commitment, and supervisory outcomes (e.g., satisfaction with supervisor, OCB beneficial to supervisor). However, regression analyses did support the hypotheses that perceptions of justice emanating from the supervisor interact with supervisory WG-identification and commitment to affect satisfaction with the supervisor, and OCB beneficial to the supervisor. These findings are consistent with the relational model of justice; yet make a unique contribution since identification does not appear to have been explicitly measured in prior studies testing the relational model of justice.

Results of regression analyses showed that perceptions of procedural and distributive justice emanating from the supervisor inversely predicted turnover intentions from the organization. These findings indicate that as ratings of supervisory procedural and distributive justice increase, intentions to leave the organization are reduced. Thus, ratings of perceived supervisory procedural justice can be used to predict turnover intentions from the organization. Supervisory interactional justice did not predict turnover intentions suggesting that when considering leaving the organization, individuals are more attentive to the implementation of policies and procedures and allocation of decisions than to how their supervisors interact with them during policy implementation.

Contributions To Justice Literature

This study extends the justice research and contributes to our understanding of the justice construct. This study is unique in its measurement of both supervisory and coworker level justices, commitment, workgroup identification, OCB, and satisfaction. Although other studies have measured these levels and sources for some of the variables (e.g., commitment, identification, satisfaction), none have measured both sources in the same study, along with fairness perceptions from both sources. This study contributes to the justice literature by showing how justice can be understood as emanating from coworkers or team members. In the most recent past, justice has been operationalized as fairness perceptions emanating from the organization or the supervisor. With the results of this study, justice might additionally be perceived as a form of fairness emanating from coworkers within a team, and should be replicated with additional research. Coworker justices were positively related to supervisory ratings of job performance, satisfaction with coworkers, and perceptions of coworker support. These results show that coworker fairness is related to team member behaviors.

This study makes a theoretical contribution by showing simultaneous support for social exchange theory and the relational model of justice in explaining the relationship between fairness perceptions and organizational behaviors and attitudes. In the past, justice research has frequently pitted the two theories against one another, although prior descriptions of social exchange theory were rather limited (Holbrook & Kulik, 1996; Huo et. al., 1996; Tyler & Degoey, 1995). The

findings from this study suggest that perhaps both may apply and can both offer information about justice perceptions in the workplace.

Comparisons To Prior Research

When compared to prior research examining identification moderating the relationship between fairness and outcomes, this study shows some similar results, yet also some differing results. For example, in the case of coworker justice predicting coworker support, justice was more strongly related to support when commitment was low as compared to when commitment was rated high. This finding initially appears opposite to those found in earlier research. Brockner and colleagues (1992), in their first study, found that when prior commitment to the organization was low, the relationship between distributive fairness (from the organization) and change in commitment by survivors of a layoff was low. When prior commitment was high, a change in commitment after the layoff was high. They did not measure procedural or interactional justice. In their second study, Brockner and colleagues (1992) found that for individuals with low prior commitment to legal authorities, the relationship between (supervisory) interactional and (organizational) procedural fairness and change in feelings of support for authorities after exposure to legal authorities was minimal. For those with high prior commitment to legal authorities, the relationship between interactional and procedural justice with change in level of support for authorities after exposure was highest.

A direct comparison of the Brockner et al. (1992) studies with the results of this present study is difficult for a number of reasons. First, in the Brockner et al. studies, the sources of fairness and sources of outcomes were inconsistent.

Fairness from the organization was measured as an antecedent, while commitment to an authority was measured as the moderator and criterion. Second, the moderator in the first study was essentially the same variable as the dependent variable: prior commitment, change in commitment. Third, the Brockner and colleagues studies examined specific situations, one-time perceptions of commitment (e.g., study 2), and change in commitment or support following a specific event (layoff or interaction with police or judge). In the present study, levels of variables (coworker or supervisor) were consistently maintained, the moderators were different variables from the criterion variables, general rather than specific fairness perceptions were measured, and lastly, current yet established perceptions of commitment and workgroup identification to a team or supervisor were measured.

Contributions To Identification Literature

This present study suggests that cognitive identification and affective commitment interact differently with justice emanating from team members versus supervisors, depending on the criterion under consideration. Further research should be conducted to verify the findings from this study and more closely examine the interactions between fairness and identification and commitment.

This study appears to be the first study to examine both supervisory and coworker workgroup-identification and commitment within the same study. The results show that individuals do perceive these two foci as separate; individuals can identify with a team member and a supervisor, or commit to a team member and supervisor. Future research should consider these separate foci when evaluating commitment and workgroup-identification as either antecedents or consequences.

Practical Implications

The results of this study have several practical implications. Overall, the results suggest that when team members do not strongly identify with the team, perceptions of fair procedures and treatment from other team members becomes more important. Perhaps without much commitment or workgroup identification in a relationship, coworkers are more attentive to fairness from one another. Although no causal relationships were tested, and therefore cannot be concluded, positive correlations among variables suggest that when one variable is rated high on the scale, so is the other. The results of this study show that team relations are important and are related to team member attitudes. This finding is important in light of the increased use of teams in organizations. Although the study of team dynamics is not new, new information can be gleaned from studies like this one that focus on perceived fairness within teams; relationships not previously examined.

With regard to individuals' relationships with their supervisors, practitioners may use the results of this study to inform supervisors that when they bring new employees who have yet to form perceptions of commitment and identification towards them into a team, supervisor interactional and procedural fairness will be more strongly related to satisfaction with the supervisor. In addition, for employees who have yet to form a strong commitment to the supervisor, fair procedures from the supervisor may encourage employees to demonstrate OCB beneficial to the supervisor. After employees form a strong commitment to the supervisor, fair procedures appear to become less important to employees in deciding whether to

demonstrate OCB beneficial to the supervisor, than they were before establishing a strong level of commitment to the supervisor.

Strengths

The strengths of this study were in obtaining supervisory ratings of job performance, OCB beneficial to the supervisor, and OCB beneficial to the coworker. In addition, measuring both supervisory and coworker levels of all variables in the study allows for direct testing of the effects of each antecedent on each consequence without the focus of the variable as a potential confound. Although obtaining supervisory ratings helped to minimize common-method variance, future research should consider incorporating ratings of coworker citizenship behaviors from coworkers either in addition to, or rather than the supervisor. Team members might be in a better position to see citizenship behaviors toward each other, more so than a supervisor might. This would be particular true for a supervisor who is in another geographical location or in a self-managed team. In addition, obtaining samples from three separate organizations contributes to the generalizability of the results to other similar organizations with similar team structures and employees.

Limitations

Although having different organizations participate contributes to the generalizability of the study results, it is also a potential weakness. It is possible that unknown differences between the organizations confounded the results. In addition, comparisons within organizations between those who completed the survey and those who did not complete the survey could not be made since archival and biographical data on the entire organization were not available.

The failure of perceived supervisor support to measure the construct it was intended to measure was unfortunate and resulted in the inability to test some of the original hypotheses and one half of the proposed model. Because this was the first time the supervisory interactional justice and perceived supervisory support were measured in one study, perhaps a pilot test prior to this study might have shed some light on the similarities between the two scales. Another weakness is the cross-sectional design of the study that does not allow for assessment of causality.

Conclusion And Future Research

The results of this study provide evidence that justice can be perceived as emanating from coworkers within a team, in addition to emanating from the supervisor. The results show that identification plays a role of varying importance depending on the type of justice, the source of justice, and the type of identification (e.g., commitment, workgroup-identification).

Future research can extend these findings by examining the hypotheses that this study could not test. Additional relational variables might be hypothesized as mediating and moderating the relationship between justice and outcomes, such as psychological contracts and trust. Researchers should attempt to examine self-managed teams, exclusively, as did Barker (1993) to determine if perceived coworker support and coworker justices take on a higher degree of importance for team members.

References

Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage.

Allen, M. W., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. Journal of Occupational Psychology, 63, 1-18.

Armeli, S., Eisenberger, R., Fasolo, P., & Lynch, P. (1998). Perceived organizational support and police performance: The moderating influence of socioemotional needs. Journal of Applied Psychology, 83, 288-297.

Arnold, H. J. (1982). Moderator variables: A clarification of conceptual, analytic, and psychometric issues. Organizational Behavior and Human Performance, 29, 143-174.

Barker, J.R. (1993). Tightening the iron cage: Concertive control in self-managing teams. Administrative Science Quarterly, 38, 408-437.

Baron, R. M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51, 1173-1182.

Becker, T. E. (1992). Foci and bases of commitment: Is the distinction worth making? Academy of Management Journal, 35, 232-244.

Bies, R. J., (in press). Interactional (in)justice: The sacred and the profane. In J. Greenberg & R. Cropanzano (Eds.). Advance in organizational justice. Lexington, MA: New Lexington Press.

Bies, R. J., & Moag, J. S. (1986). Interactional justice: Communication criteria for fairness. In B. Sheppard (Ed.), Research on negotiation in organizations (Vol. 1, pp. 43-55). Greenwich, CT: JAI Press.

Bishop, J. W., & Scott, K. D. (2000). Organizational and team commitment in a team environment. Journal of Applied Psychology, 85, 439-450.

Bishop, J. W., Scott, K. D., & Burroughs, S. M. (2000). Support, commitment, and employee outcomes in a team environment. Journal of Management, 26, 1113-1132.

Blau, P. (1964). Exchange and power in social life. New York, NY: Wiley & Sons.

Brockner, J., Tyler, T. R., & Cooper-Schneider, R. (1992). The influence of prior commitment to an institution on reactions to perceived unfairness: The higher they are, the harder they fall. Administrative Science Quarterly, 37, 241-261.

Byrne, Z. S. & Cropanzano, R. (2001). History of organizational justice: The founders speak. In R. Cropanzano (Ed). Justice in the workplace (Volume II): From theory to practice. Mahwah, NJ: Lawrence Erlbaum Associates.

Byrne, Z. S., & Cropanzano, R. (2000, April). To which source do I attribute this fairness? Differential effects of multi-foci justice on organizational work behaviors. Presented at the 15th annual conference of the Society of Industrial and Organizational Psychology, New Orleans, LA.

Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioral sciences. Hillsdale, NJ: Lawrence Erlbaum Associates.

Colquitt, J. A. (in press). On the dimensionality of organizational justice: A construct validation of a measure. Journal of Applied Psychology.

Cropanzano, R., & Byrne, Z. S. (2000). How workers manage relationships in a complex social world: A multi-foci approach to procedural and interactional justice. In M. Van Vugt, M. Snyder, T. Tyler, & A. Biel (Eds.), Cooperation in modern society: Promoting the welfare of communities, states, and organizations. (pp. 142-161). London, UK: Routledge.

Cropanzano, R., & Greenberg, J. (1997). Progress in organizational justice: Tunneling through the maze. In C. L. Cooper, & I. T. Robertson (Eds.), International review of industrial and organizational psychology (Vol. 12, pp.317-372). New York: John Wiley & Sons.

Cropanzano, R., Prehar, C. A., & Chen, P. (2000). Using social exchange theory to distinguish procedural and interactional justice. Unpublished manuscript.

Deutsch, M. (1985). Distributive justice: A social-psychological perspective. New Haven: Yale University Press.

Donovan, M.A., Drasgow, F., & Munson, L. J. (1998). The perceptions of fair interpersonal treatment scale: Development and validation of a measure of interpersonal treatment in the workplace. Journal of Applied Psychology, 5, 683-692.

Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. Journal of Applied Psychology, 82, 812-820.

Eisenberger, R., Fasolo, P. M, & Davis-LaMastro, V. (1990). Effects of perceived organizational support on employee diligence, innovation, and commitment. Journal of Applied psychology, 53, 51-59.

Eisenberger, R., Huntington, R., Hutchinson, S., & Sowa, D. (1986). Perceived organizational support. Journal of Applied Psychology, 71, 500-507.

Folger, R., & Bies, R. J. (1989). Managerial responsibilities and procedural justice. Employee Responsibilities and Rights Journal, 2, 79-90.

Folger, R., & Greenberg, J. (1985). Procedural justice: An interpretive analysis of personnel systems. In K. M. Rowland, & G. R. Ferris (Eds.), Research in personnel and human resources management (Vol. 3, pp.141-183). Greenwich, CT: JAI Press.

Folger, R., & Konovsky, M. A. (1989). Effects of procedural and distributive justice on reactions to pay raise decisions. Academy of Management Journal, 32, 115-130.

Gilliland, S.W. (1993). The perceived fairness of performance evaluations. Journal of Applied Psychology, 71, 340-342.

Gouldner, A.W. (1960). The norm of reciprocity. American Sociological Review, 25, 161-178.

Greenberg, J. (1986). Determinants of perceived fairness of performance evaluations. Journal of Applied Psychology, 71, 340-342.

Guzzo, R. A. (1995). Introduction: At the intersection of team effectiveness and decision making. In R. A. Guzzo and E. Salas (Eds.), Team effectiveness and decision making in organizations. (pp. 1-8). San Francisco, CA: Jossey-Bass.

Hackman, J. R. (1992). Group influences on individuals in organizations. In M. D. Dunnette and L. M. Hough, (Eds.), Handbook of industrial and organizational psychology. (pp. 199-267). Palo Alto, CA: Consulting Psychologists Press.

Holbrook, R. L., & Kulik, C. T. (1996). Strength of membership influences on reactions to bank loan procedures. Paper presented at the annual meeting of the Society for Industrial and Organizational Psychology.

Huo, Y. J., Smith, H.J., Tyler, T. R., & Lind, E. A. (1996). Superordinate identification, subgroup identification, and justice concerns: Is separatism the problem; Is assimilation the answer? Psychological Science, 7, 40-45.

Konovsky, M. A., & Cropanzano, R. (1991). Perceived fairness of employee drug testing as a predictor of employee attitudes and job performance. Journal of Applied Psychology, 76, 698-707.

Konovsky, M. A., & Folger, R. (1991). The effects of procedures, social accounts, and benefits level on victims' layoff reactions. Journal of Applied Social Psychology, 21, 630-650.

Konovsky, M. A., & Pugh, S. D. (1994). Citizenship and social exchange. Academy of Management Journal, 37, 656-669.

Kottke, J. L., & Sharafinski, C. E. (1988). Measuring perceived supervisory and organizational support. Educational and Psychological Measurement, 48, 1075-1079.

Lind, E. A. (1995). Justice and authority relations in organizations. In R. S. Cropanzano and K. M. Kacmar (Eds.), Organizational politics, justice, and support: Managing the social climate of the workplace. (pp. 83-96). Westport, CT: Quorum Books.

Lind, E. A., & Tyler, T. R. (1988). The social psychology of procedural justice. New York, NY: Plenum Press.

Mael, F. A., & Tetrick, L. E. (1992). Identifying organizational identification. Educational and Psychological Measurement, 52, 813-824.

Malatesta, R. M. (1995). Understanding the dynamics of organizational and supervisory commitment using a social exchange framework. Unpublished doctoral dissertation, Wayne State University, Michigan.

Malatesta, R. M., & Byrne, Z. S. (1997). The impact of formal and interactional procedures on organizational outcomes. Paper presented at the 12th annual conference of the Society for Industrial and Organizational Psychology, St. Lois, MO.

Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, M. S. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment of work relationships. Academy of Management Journal, 43, 738-748.

Meyer, J. P. (1997). Organizational commitment. In C. L. Cooper & I. T. Robertson (Eds.), International review of industrial and organizational psychology (pp. 175-228). New York: John Wiley & Sons.

Meyer, J. M. & Allen, N.J. (1997). Commitment in the workplace: Theory, research, and application, advanced topics in organizational behavior. Thousand Oaks, CA: Sage.

Millward, L. J., & Hopkins, L. J. (1998). Psychological contracts, organizational and job commitment. Journal of Applied Social Psychology, 28, 1530-1556.

Mohrman, S. A., & Cohen, S. G. (1995). When people get out of the box: New relationships, new systems. In A. Howard (Ed.), The changing nature of work. (pp. 365-410). San Francisco, CA: Jossey-Bass.

Mohrman, S. A., Cohen, S. G., & Mohrman, A.M. (1995). Designing team-based organizations: New forms of knowledge work. San Francisco, CA: Jossey-Bass.

Moorman, R. H. (1991). Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship? Journal of Applied Psychology, 76, 845-855.

Moorman, R. H. (1999). Perceived organizational support and the meaning of just procedures: Sorting the relative contribution of POS and procedural justice in predicting organizational citizenship behavior. Presented at the 14th annual conference of the Society of Industrial and Organizational Psychology in Atlanta, GA.

Moorman, R. H., Blakely, G. L., & Niehoff, B. P. (1998). Does perceived organizational support mediate the relationship between procedural justice and organizational citizenship behavior? Academy of Management Journal, 41, 351-357.

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. Journal of Vocational Behavior, 14, 224-247.

Niehoff, B. P., & Moorman, R. H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. Academy of Management Journal, 36, 527-556.

Nunnally, J.C., & Bernstein, I. H. (1994). Psychometric theory. New York: McGraw-Hill.

Olkin, I., & Finn, J. D. (1995). Correlations redux. Psychological Bulletin, 118, 155-164.

Organ, D. W. (1988). Organizational citizenship behavior: The good soldier syndrome. Lexington, MA: Lexington.

Organ, D. W. (1997). Organizational citizenship behavior: It's construct clean-up time. Human Performance, 10, 85-97.

Organ, D. W., & Moorman, R. H. (1993). Fairness and organizational citizenship behavior: What are the connections? Social Justice Research, 6, 5-18.

Podsakoff, P. M., & MacKenzie, S. B. (1993). Citizenship behavior and fairness in organizations: Issues and directions for future research. Employee Responsibilities and Rights Journal, 6, 257-269.

Randall, M. L., Cropanzano, R., Bormann, C.A., & Birjulin, A. (1999). Organizational politics and organizational support as predictors of work attitudes, job performance, and organizational citizenship behavior. Journal of Organizational Behavior, 20, 159-170.

Riordan, C. M., & Weatherly, E.W. (1999). Defining and measuring employees' identification with their work groups. Educational and Psychological Measurement, 59, 310-324.

Settoon, R., Bennett, N., & Liden, R. (1996). Social exchange in organizations: Perceived organizational support, leader-member exchange, and employee reciprocity. Journal of Applied Psychology, 81, 219-227.

Shore, L. M., & Shore, T. H. (1995). Perceived organizational support and organizational justice. In R. Cropanzano & K. M. Kacmar (Eds.), Organizational politics, justice, and support: Managing social climate at work. (pp. 149-164). Westport, CT: Quorum Press.

Stevens, J. (1996). Applied multivariate statistics for the social sciences. Mahwah, NJ: Erlbaum.

Stoner, J. A. F., Freeman, A. E., & Gilbert, D.A. Jr. (1995). Teams and teamwork. In J. A. F. Stoner, A. E. Freeman, and D.A. Gilbert, Jr. (Eds.), Management. (pp. 497-521). Englewood Cliffs, NJ: Prentice Hall.

Sujak, D.A. (1997). Organizational justice and drug testing: The relationships of three types of justice perceptions to employee work responses. Unpublished doctoral dissertation. Northern Illinois University.

Tansky, J. W. (1993). Justice and organizational citizenship behavior: What is the relationship? Employee Responsibilities and Rights Journal, 6, 195-207.

Townsend, A.M., DeMarie, S. M., & Hendrickson, A. R. (1998). Virtual teams: Technology and the workplace of the future. Academy of Management Executive, 12(3), 17-29.

Tyler, T. R. (1988). What is procedural justice? Criteria used by citizens to assess the fairness of legal procedures. Law and Society Review, 22, 103-135.

Tyler, T. R., & Bies, R.J. (1990). Beyond formal procedures: The interpersonal context of procedural justice. In J. S. Carroll (Ed.), Applied Social Psychology and Organizational Settings. (pp. 77-98). Hillsdale, NJ: Lawrence Erlbaum Associates.

Tyler, T. R., & Degoey, P. (1995). Collective restraint in social dilemmas: Procedural justice and social identification effects on support for authorities. Journal of Personality and Social Psychology, 69, 482-497.

Tyler, T. R., Degoey, P., & Smith, H. J. (1996). Understanding why the justice of group procedures matters: A test of the psychological dynamics of the group-value model. Journal of Personality and Social Psychology, 70, 913-930.

Tyler, T. R., & Lind, E. A. (1992). A relational model of authority in groups. In M. Zanna (Ed.), Advances in Experimental Social Psychology, 25, 115-191.

Wellins, R. S., Byham, W. C., & Wilson, J. M. (1991). Empowered teams: Creating self-directed work groups that improve quality, productivity, and participation. San Francisco, CA: Jossey-Bass.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. Journal of Management, 17, 601-618.

Appendix A

SUPERVISORY JUSTICE

Please circle T for true or F for false to answer this question.
I have a formally defined, immediate supervisor for my team or workgroup. T F

Strongly Disagree 1	Moderately Disagree 2	Slightly Disagree 3	Neither Agree nor disagree 4	Slightly Agree 5	Moderately Agree 6	Strongly Agree 7

The following items refer to the procedures your supervisor uses to make decisions.

(Procedural justice from Colquitt, in press –modified)

1. ___ You have been able to express your views and feelings during those procedures.
2. ___ You have had influence over the outcome arrived at by those procedures.
3. ___ You feel those procedures have been applied consistently.
4. ___ You feel those procedures have been free of bias.
5. ___ You feel those procedures have been based on accurate information.
6. ___ You feel you been able to appeal the outcome arrived at by those procedures.

(Procedural Justice From Byrne, 1999)

7. ___ Where I work, my supervisors' procedures and guidelines are very fair.
8. ___ The procedures my supervisor uses to make decisions are not fair. (R)
9. ___ I can count on my supervisor to have fair policies.
10. ___ My supervisor does not have any fair policies. (R)

(Interactional Justice From Byrne, 1999)

11. ___ My supervisor's decisions are made out in the open so that everyone always knows what's going on.
12. ___ Whether the outcome is good or bad, I always feel like I am kept informed by my supervisor.
13. ___ Whether right or wrong, my supervisor always explains decisions to me.
14. ___ I feel my supervisor holds me in high regard.
15. ___ My supervisor treats me with dignity.
16. ___ My supervisor treats me with respect.

To what extent do you agree that your supervisor ensures the following:

(Distributive Justice from Colquitt, in press- modified)

17. ___ The effort you have put into the team is recognized.
18. ___ The recognition you receive is appropriate for the work you have completed.
19. ___ Your recognition reflects what you have contributed to the team.
20. ___ The recognition you receive is justified, given your performance on the team.

SUPERVISORY WG-IDENTIFICATION

Instructions: Please use the numbers from the scale above to indicate the extent to which you agree or disagree with the following statements.

Strongly Disagree 1	Moderately Disagree 2	Slightly Disagree 3	Neither Agree nor disagree 4	Slightly Agree 5	Moderately Agree 6	Strongly Agree 7

(From Riordan and Weatherly, 1999 – Work Group Identification scale)

1. ___ It is important to me that others think highly of my supervisor.
2. ___ It is important to me that others do not criticize my supervisor.
3. ___ It is important to me that my supervisor is successful.
4. ___ It is important to me that my supervisor is acknowledged for his/her success.

(From Allen & Meyer, 1990 – Affective Commitment scale)

5. ___ I would be very happy to spend the rest of my career with my supervisor.
6. ___ I enjoy talking about my supervisor with people outside my team.
7. ___ I do not feel like "part of the family" with my supervisor. (R)
8. ___ I think that I could as easily become as attached to another supervisor as I am to this one.
9. ___ I really feel as if my supervisor's problems are my own.
10. ___ I do not feel "emotionally attached" to my supervisor. (R)
11. ___ My supervisor has a great deal of personal meaning to me.
12. ___ I do not feel a strong sense of belongingness to my supervisor. (R)

COWORKER JUSTICE PROCEDURES

Instructions: For each statement below, please write the number that best describes how you feel about your current workgroup team members. Refer to members of your primary team (team with whom you currently work more than 50% of your work week). "Workgroup" and "team" refer to the same thing. Do not use N/A as a response, or leave any question blank.

Strongly Disagree 1	Moderately Disagree 2	Slightly Disagree 3	Neither Agree nor disagree 4	Slightly Agree 5	Moderately Agree 6	Strongly Agree 7

The following items refer to the procedures your coworkers on your primary team use to make decisions.

(Procedural Justice from Colquitt, in press - modified)

1. ___ You have been able to express your views and feelings during those procedures.
2. ___ You have had influence over the outcome arrived at by those procedures.
3. ___ You feel those procedures have been applied consistently.
4. ___ You feel those procedures have been free of bias.
5. ___ You feel those procedures have been based on accurate information.
6. ___ You feel you been able to appeal the outcome arrived at by those procedures.
7. ___ You feel those procedures upheld ethical and moral standards.

(Interactional Justice From Byrne, 1999)

8. ___ My coworkers' decisions are made out in the open so that everyone always knows what's going on.
9. ___ My coworkers make it clear to me that I am a valuable team member.
10. ___ Whether the outcome is good or bad, I always feel like I am kept informed by my coworkers.
11. ___ My coworkers keep me informed of why things happen the way they do.
12. ___ My coworkers always explain team decisions to me.
13. ___ I feel my coworkers hold me in high regard.
14. ___ My coworkers treat me with dignity.
15. ___ My coworkers treat me with respect.
16. ___ My coworkers always explain group decisions to me. (Colquitt, in press)
17. ___ My coworkers refrain from making improper remarks or comments to me. (From Colquitt, in press)
18. ___ My coworkers treat me in a polite manner. (Colquitt, in press)

(Distributive Justice from Colquitt, in press - modified)

To what extent do you agree that your coworkers on your primary team ensure the following:

19. ___ The effort you have put into the team is recognized.
20. ___ The recognition you receive is appropriate for the work you have completed.
21. ___ Your recognition reflects what you have contributed to the team.
22. ___ The recognition you receive is justified, given your performance on the team.

COWORKER WG-IDENTIFICATION

Instructions: Please use the numbers from the scale below to indicate the extent to which you agree or disagree with the following statements about your primary work group or team. Refer to members of your primary team (team or work group with whom you currently work more than 50% of your work week). "Workgroup" and "team" refer to the same thing.

Strongly Disagree 1	Moderately Disagree 2	Slightly Disagree 3	Neither Agree nor disagree 4	Slightly Agree 5	Moderately Agree 6	Strongly Agree 7

(From Riordan and Weatherly, 1999 – Work Group Identification scale)

1. _____ It is important to me that others think highly of my workgroup.
2. _____ It is important to me that others do not criticize my workgroup.
3. _____ It is important to me that my workgroup is successful.
4. _____ It is important to me that I am a member of my workgroup.
5. _____ It is important to me that my workgroup is acknowledged for its success.

(From Allen & Meyer, 1990 – Affective Commitment scale)

6. _____ I would be very happy to spend the rest of my career with this workgroup.
7. _____ I enjoy talking about my workgroup with people outside of it.
8. _____ I do not feel like "part of the family" with my workgroup. (R)
9. _____ I think that I could as easily become as attached to another workgroup as I am to this one.
10. _____ I really feel as if this workgroup's problems are my own.
11. _____ I do not feel "emotionally attached" to this workgroup. (R)
12. _____ This workgroup has a great deal of personal meaning to me.
13. _____ I do not feel a strong sense of belonging to my workgroup. (R)

SUPPORT (supervisor, workgroup)

Instructions: For each statement below, please write the number that best describes how you feel about your current supervisor and coworkers on your primary team (team or work group with whom you currently work more than 50% of your work week).

Strongly Disagree 1	Moderately Disagree 2	Slightly Disagree 3	Neither Agree nor disagree 4	Slightly Agree 5	Moderately Agree 6	Strongly Agree 7

Please use the numbers from the scale above to indicate the extent to which you agree or disagree with the following statements.

(From Eisenberger, Cummings, Armeli, & Lynch, 1997)

1. ___ My supervisor strongly considers my goals and values.
2. ___ My supervisor really cares about my well-being.
3. ___ If I did the best job possible, my supervisor would be sure to notice.
4. ___ My supervisor cares about my general satisfaction at work.
5. ___ My supervisor would forgive an honest mistake on my part.
6. ___ If given the opportunity, my supervisor would take advantage of me. (R)
7. ___ My supervisor cares about my opinions.
8. ___ My supervisor is willing to help me when I need a special favor.
9. ___ My coworkers care about my opinions.
10. ___ Help is available from my work group team members when I have a problem.
11. ___ My coworkers would forgive an honest mistake on my part.
12. ___ If given the opportunity, my coworkers would take advantage of me. (R)
13. ___ My coworkers are willing to help me if I need a special favor.
14. ___ My coworkers strongly consider my goals and values.
15. ___ My coworkers really care about my well-being.
16. ___ If I did the best job possible, my coworkers would be sure to notice.

SATISFACTION WITH COWORKERS AND SUPERVISOR

Instructions: Please use the numbers from the scale below to specify the extent to which you feel satisfied with either your coworkers or supervisor as indicated by the question.

Very Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied
1	2	3	4	5

(Developed for this study)

How satisfied are you with...

1. ___ the recognition you receive from your coworkers for doing good work?
2. ___ the recognition you receive from your supervisor for doing good work?
3. ___ the work itself?
4. ___ your overall job?
5. ___ the set of responsibilities you have?
6. ___ your involvement in decisions that affect your work?
7. ___ your coworkers in your primary team?
8. ___ your coworkers in other teams to which you belong?
9. ___ your coworkers' involvement in decisions that affect the team?
10. ___ your coworkers' treatment of one another?
11. ___ the level of teamwork your coworkers display?
12. ___ the amount of resources your group receives to do its job?
13. ___ how assignments are made within the team by the team members?
14. ___ how assignments are made by the supervisor?

INTENTIONS and RELATIONS

Instructions: Please use the numbers from the scale below to indicate the extent to which you agree or disagree with the following statements.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor disagree	Slightly Agree	Moderately Agree	Strongly Agree
1	2	3	4	5	6	7

1. ___ I intend to leave this organization within the next year.
2. ___ I would leave my organization if a position were available in another company.
3. ___ I intend to remain with this organization indefinitely.
4. ___ I intend to leave this work group within the next year.
5. ___ I would leave my team if a position were available in another organization.
6. ___ I intend to remain with this work group indefinitely.

Appendix B

BACKGROUND INFORMATION

Instructions: To help me better interpret the results of the survey please answer the following questions about yourself. All your responses are strictly confidential and will be used for research purposes only.

1. Please indicate the age group to which you belong:
   1 under 20
   2 between 20 and 35
   3 between 36 and 50
   4 between 51 and 65
   5 over 65

2. Please circle your gender (1) Male (2) Female

3. Please indicate the ethnic group to which you belong.
   1 Latino/Hispanic
   2 African-American/Black
   3 Native American
   4 Caucasian/White
   5 Asian/Indian/Pacific Islander
   6 None of these

4. Please indicate the number of individuals, including yourself, in your primary workgroup (the group with whom you work more than 50% of your time).
   2 3 4 5 6 7 8-11 12-16

Appendix C

Subordinate ID#: _____

SUPERVISOR OBSERVATIONS OF SUBORDINATE

Instructions: Please complete the following questionnaire for each subordinate you supervise. Please identify the subordinate you are rating, using the code given to you, in the upper right corner of the questionnaire. *For each statement below*, please write the number that best describes how frequently you feel your subordinate engages in the following behavior in his/her current job. Do not leave a blank or put N/A.

Never	Occasionally	Fairly many times	Very Often	Always
1	2	3	4	5

1. _____ Helps coworkers who have heavy workloads.
2. _____ Helps coworkers who have been absent.
3. _____ Takes time out to listen to coworkers' problems and worries.
4. _____ Goes out of his/her way to help new team members.
5. _____ Takes a personal interest in other team members.
6. _____ Passes along information to co-workers.
7. _____ Accepts added responsibility when you are absent.
8. _____ Helps you when you have a heavy work load.
9. _____ Assists you with your work (when not asked).
10. _____ Takes a personal interest in you.
11. _____ Passes along work-related information to you.
12. _____ Adequately completes assigned duties.
13. _____ Fulfills responsibilities specified in job description.
14. _____ Performs tasks that are expected of him/her.
15. _____ Meets formal performance requirements of the job.
16. _____ Engages in activities that will directly affect his/her performance evaluation.
17. _____ Neglects aspects of the job he/she is obligated to perform.
18. _____ Fails to perform essential duties.

Appendix D

COLORADO STATE UNIVERSITY RESEARCH PROJECT

Effects of Perceptions of Organizational Justice, Identification, and Support on Outcomes Within Work Teams

CONTACT/CO-INVESTIGATOR: Zinta S. Byrne phone: (970) 491-6762 email:zinta@lamar.colostate.edu
PRINCIPAL INVESTIGATOR: Russell Cropanzano, Ph.D.
PURPOSE OF THE RESEARCH: This study seeks to gain greater understanding about team membership and fairness in the workplace. The results of this project will be used to assess how fairness within and between teams, and the general work environment, can be improved.

PROCEDURES: You will be asked about your attitude towards certain aspects of your team, work environment, and supervisor. Participation involves completing a 15-minute questionnaire. Your time is greatly appreciated. With your permission only, your supervisor will be asked to complete a 2-minute survey regarding your work behavior, used for research purposes only. If you choose to give permission, please complete the permission form. You may still participate, with no negative consequences, even if you choose not to have your supervisor supply information about your work performance.
RISKS INHERENT IN THE PROCEDURES: The results will be reported for groups of people only. It will **NOT** be possible to identify any single individual. The only foreseeable risk to you by participating is that if you give us permission to get your supervisor's ratings of your performance, your supervisor will then be asked to consider your job performance and work behaviors. This could potentially lead to you being treated differently than if your work performance had never been considered. Please be assured that your supervisor will never have access to your responses to this survey, nor will the supervisor's ratings ever be a part of your employee file. Furthermore, no employment decisions will be made about you on the basis of either the questionnaire or the supervisory rating form. There are no other foreseeable risks. It is not possible to identify all potential risks in research procedures, but the researchers have taken reasonable safeguards to minimize any known and potential, but unknown, risks.
BENEFITS: There are no direct benefits to you by participating or not participating in this study.
CONFIDENTIALITY: You are assured of complete confidentiality. To ensure this, your questionnaire has an identification number. This number is used to initially link your survey to your permission form. A unique id number is then generated by the co-investigator to be given to your supervisor, for use on the supervisory rating form. After this number is generated, your permission form is destroyed. Using the id codes only, your survey is matched with one from your supervisor for research purposes. Your name will never be placed on the survey, or on your supervisor's rating form.
LIABILITY: The Colorado Governmental Immunity Act determines and may limit Colorado State University's legal responsibility if an injury happens because of this study. Claims against the University must be filed within 180 days of the injury. Questions about subjects' rights may be directed to Celia S. Walker at (970) 491-1563.
PARTICIPATION: You should also understand that your participation in this research project is voluntary, and you may withdraw at any time without penalty. If you decide to participate in the study, you may withdraw and stop participating at any time without penalty or loss of benefits to which you are otherwise entitled. Completion of the survey acknowledges that you have read the information stated and willingly agree to participate.

Table 1

Means and Standard Deviations of Study Variables

		N	Mean	SD
1.	Supervisory Interactional Justice	175	5.90	1.20
2.	Supervisory Procedural Justice	175	5.36	1.39
3.	Supervisory Distributive Justice	175	5.17	1.73
4.	Coworker Interactional Justice	176	5.93	1.12
5.	Coworker Procedural Justice	176	5.48	1.27
6.	Coworker Distributive Justice	175	5.24	1.53
7.	Supervisory Commitment	176	4.10	1.23
8.	Supervisory WG-Identification	176	5.82	1.13
9.	Coworker Commitment	175	4.88	1.25
10.	Coworker WG-Identification	176	6.69	0.54
11.	Perceived Coworker Support	175	5.83	1.05
12.	Satisfaction in Supervisor	176	3.63	0.91
13.	Satisfaction in Coworker	175	3.84	0.68
14.	Turnover Intentions	177	3.42	1.58

Note. Scores for variables 1-11 ranged from 1 to 7. Scores for variables 12 and 13 ranged from 1 to 5.

Table 1 (continued)

Means and Standard Deviations of Study Variables

		N	Mean	SD
15.	Supervisory Ratings of Job Performance	176	4.28	0.55
16.	Supervisory Ratings of OCB Beneficial to Supervisor	176	2.74	1.22
17.	Supervisory Ratings of OCB Beneficial to Coworkers	176	3.67	0.81
18.	Age (20-35 years) (0= not in group, 1 = in group)	49	--	--
19.	Age (36-50 years) (0= not in group, 1 = in group)	81	--	--
20.	Age (51-65 years) (0= not in group, 1 = in group)	43	--	--
21.	Gender (1= male, 2= female)	172	1.66	.47
22.	Team size (0= in team < 8 people, 1=in team ≥ 8 people)	177	.35	.48

Note. OCB = organizational citizenship behaviors. Scores on variables 15-17 ranged from 1 to 5.

Table 2

Intercorrelations, and Coefficient Alpha Reliability Estimates (N= 177)

		1	2	3	4	5	6	7	8	9	10	11
1.	Supervisory Interactional Justice	(.91)										
2.	Supervisory Procedural Justice	.68**	(.94)									
3.	Supervisory Distributive Justice	.68**	.67**	(.95)								
4.	Coworker Interactional Justice	.45**	.40**	.25**	(.88)							
5.	Coworker Procedural Justice	.60**	.61**	.44**	.69**	(.93)						
6.	Coworker Distributive Justice	.50**	.43**	.57**	.54**	.62**	(.95)					
7.	Supervisory Commitment	.60**	.43**	.49**	.20**	.32**	.28**	(.77)				
8.	Supervisor WG-Identification	.57**	.47**	.44**	.22**	.33**	.33**	.53**	(.86)			
9.	Coworker Commitment	.39**	.33**	.33**	.47**	.49**	.52**	.44**	.28**	(.84)		
10.	Coworker WG-Identification	.21**	.18*	.12	.31**	.30**	.28**	.15*	.33**	.36**	(.76)	
11.	Perceived Coworker Support	.47**	.35**	.36**	.68**	.64**	.72**	.24**	.25**	.64**	.35**	(.91)

Note: Scales 1-11 were measured on a 7-point scale. Coefficient alpha reliability estimates appear in the parentheses along the diagonal. * $p < .05$, ** $p < .01$ (1-tailed)

Table 2 (continued)

		1	2	3	4	5	6	7	8	9	10	11	12
12.	Satisfaction in Supervisor	.72**	.66**	.74**	.32**	.50**	.50**	.55**	.46**	.36**	.13*	.38**	(.78)
13.	Coworkers Satisfaction	.51**	.47**	.41**	.65**	.64**	.59**	.29**	.33**	.57**	.34**	.70**	.51**
14.	Turnover Intentions	-.27**	-.40**	-.40**	-.24**	-.39**	-.43**	-.27**	-.24**	-.37**	-.24**	-.36**	-.41**
15.	Supervisory Rating of Job Performance	.30**	.20**	.27**	.13*	.20**	.15*	.26**	.11	.04	-.05	.14*	.24**
16.	Supervisor Rating OCB Beneficial to Supervisor	.26**	.19**	.20**	.14*	.22**	.14*	.31**	.14*	.08	-.08	.05	.30**
17.	Supervisor Rating OCB Beneficial to Coworker	.21**	.17*	.21**	.07	.18*	.09	.24**	.04	.06	-.12	.05	.21**
18.	Age (20-35)	.19**	.19**	.08	.07	.07	-.02	.18**	.13*	.00	.05	-.01	.18**
19.	Age (36-50)	-.17**	-.20**	-.12	-.06	-.05	-.04	-.08	-.12	.04	.00	.01	-.20**
20.	Age (51-65)	.00	.02	.04	.00	.00	.06	-.10	.00	-.07	-.05	-.02	.04

Note: Scales 12,13, 15-17 were measured on a 5-point scale. Turnover was measured on a 7-point scale. Variables 18-20: 1 = in the age group, 0 = not in the age group. Coefficient alpha reliability estimates appear in the parentheses along the diagonal. OCB = organizational citizenship behaviors. * $p < .05$, ** $p < .01$ (1-tailed)

Table 2 (continued)

		1	2	3	4	5	6	7	8	9	10	11	12
21.	Gender	-.06	.03	.06	.02	-.02	.09	.04	.09	.14*	.19**	.01	.09
22.	Team size	-.14*	.02	-.12	-.11	-.12	-.07	-.22**	.05	-.15*	.04	-.18*	-.16*

Note: Gender: male = 1, female = 2. Team size: 0 = team < 8 members, 1=team ≥ 8 members.
* $p < .05$, ** $p < .01$ (1-tailed)

Table 2 (continued)

		13	14	15	16	17	18	19	20	21	22
13.	Coworkers Satisfaction	(.82)									
14.	Turnover Intentions	-.37**	(.86)								
15.	Supervisory Rating of Job Performance	.05	-.01	(.86)							
16.	Supervisor Rating OCB Beneficial to Supervisor	.05	-.05	.48**	(.87)						
17.	Supervisor Rating OCB Beneficial to Coworker	-.02	-.02	.72**	.58**	(.91)					
18.	Age (20-35)	.11	.04	.10	.23**	.05	--				
19.	Age (36-50)	-.02	.05	-.08	-.13*	-.03	-.57**	--			
20.	Age (51-65)	-.11	-.11	-.03	-.08	-.03	-.35**	-.52**	--		
21.	Gender	.08	-.11	.00	.17*	.07	-.08	.14*	-.04	--	
22.	Team Size	-.11	.13*	-.03	-.09	-.03	-.06	.13*	-.09	.11	--

Note: Variables 13, 15-17 were measured on a 5-point scale. Coefficient alpha reliability estimates appear in the parentheses along the diagonal. OCB = organizational citizenship behaviors.
Variables 18-20: 1 = in the age group, 0 = not in the age group. Gender: male = 1, female = 2.
Team size: 0 = team < 8 members, 1=team ≥ 8 members.
* $p < .05$, ** $p < .01$ (1-tailed)

Table 3

Summary of Hierarchical Regression Analyses For Coworker Fairness Predicting Turnover Intentions

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				3.09*	.02	
	Team Size	.09†	.23			
Step 2				12.36**	.23	.21**
	Interactional Justice	.12	.13			
	Procedural Justice	-.25†	.25			
	Distributive Justice	-.34**	.09			

Note. N = 175, β = standardized regression coefficient after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2
† $p < .10$, * $p < .05$, ** $p < .01$

Table 4

Summary of Hierarchical Regression Analyses For Supervisory Fairness Predicting Turnover Intentions

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				2.84*	.02	
	Team size	.12*	.23			
Step 2				11.32**	.21	.19**
	Interactional Justice	.15†	.14			
	Procedural Justice	-.32**	.12			
	Distributive Justice	-.27**	.09			

Note. N = 175, β = standardized regression coefficient after all variables have been entered into the request equation, se β = std error, ΔR^2 = change in R^2
† $p < .10$, * $p < .05$, ** $p < .01$

Table 5

Summary of Hierarchical Multiple Regression Analysis for Moderation Effects of Coworker Commitment on Coworker Justice Predicting Perceived Coworker Support

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				5.22*	.03	
	Team size	-.05	.09			
Step 2				80.58**	.66	.63**
	Interactional Justice	.80**	.18			
	Procedural Justice	.37†	.18			
	Distributive Justice	-.10	.14			
Step 3				77.46**	.70	.04**
	Coworker Commitment	.92**	.17			
Step 4				54.86**	.73	.03**
	Interactional Justice x Coworker Commitment	-1.04**	.04			
	Procedural Justice x Coworker Commitment	-.57†	.04			
	Distributive Justice x Coworker Commitment	.77**	.03			

Note. N = 174, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 6

Summary of Multiple Regression Analysis for Coworker Support Mediating Coworker Commitment Moderating Coworker Justice Predicting OCB Beneficial to Coworker

Equation	Independent	Dependent	β	se β	F	R^2	ΔR^2
1	Interactional Justice x Coworker Commitment	Perceived Coworker Support	.32**	.01	85.42**	.60	
	Procedural Justice x Coworker Commitment		-.03	.01			
	Distributive Justice x Coworker Commitment		.51**	.01			
2	Interactional Justice x Coworker Commitment	OCB Beneficial to Coworker	-.13	.02	.92	.02	
	Procedural Justice x Coworker Commitment		.26	.02			
	Distributive Justice x Coworker Commitment		-.03	.01			
3	Interactional Justice x Coworker Commitment	OCB Beneficial to Coworker	-.12	.02	.72	.02	
	Procedural Justice x Coworker Commitment		.26	.02			
	Distributive Justice x Coworker Commitment		-.01	.01			
	Perceived Coworker Support		-.04	.09			

Note. N = 173, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 7

Summary of Hierarchical Multiple Regression Analyses for Coworker Commitment Moderating Coworker Justice Predicting OCB Beneficial to Coworker

Step	Variable	β	se β	F	R^2	ΔR^2
1				2.23*	.04	
	Interactional Justice	-.49†	.25			
	Procedural Justice	1.09**	.26			
	Distributive Justice	-.28	.19			
2				1.72†	.04	
	Coworker Commitment	.12	.24			
3				1.68†	.07	.03†
	Interactional Justice x Coworker Commitment	.92†	.06			
	Procedural Justice x Coworker Commitment	-1.60**	.06			
	Distributive Justice x Coworker Commitment	.43	.04			

Note. N = 173, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 8

Summary of Multiple Regression Analysis for Coworker Support Mediating Coworker Commitment Moderating Coworker Justice Predicting Satisfaction With Coworker

Equation	Independent	Dependent	β	se β	F	R^2	ΔR^2
1	Interactional Justice x Coworker Commitment	Perceived Coworker Support	.32**	.01	85.42**	.60	
	Procedural Justice x Coworker Commitment		-.03	.01			
	Distributive Justice x Coworker Commitment		.51**	.01			
2	Interactional Justice x Coworker Commitment	Satisfaction With Coworker	.29*	.01	58.34**	.51	
	Procedural Justice x Coworker Commitment		.34**	.01			
	Distributive Justice x Coworker Commitment		.11	.01			
3	Interactional Justice x Coworker Commitment	Satisfaction With Coworker	.15	.01	57.61**	.58	.07**
	Procedural Justice x Coworker Commitment		.35**	.01			
	Distributive Justice x Coworker Commitment		-.11	.01			
	Perceived Coworker Support		.42**	.05			

Note. N = 174, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † p <.10, * p < .05, ** p < .01

Table 9

Summary of Multiple Regression Analysis for Coworker Support Mediating Coworker Commitment Moderating Coworker Justice Predicting Performance Ratings

Equation	Independent	Dependent	β	se β	F	R^2	ΔR^2
1	*Interactional Justice x Coworker Commitment*	Perceived Coworker Support	.32**	.01	85.42**	.60	
	Procedural Justice x Coworker Commitment		-.03	.01			
	Distributive Justice x Coworker Commitment		.51**	.01			
2	Interactional Justice x Coworker Commitment	Supervisory Ratings of Performance	-.22	.01	1.05	.02	
	Procedural Justice x Coworker Commitment		.23	.01			
	Distributive Justice x Coworker Commitment		.09	.01			
3	Interactional Justice x Coworker Commitment	Supervisory Ratings of Performance	-.27†	.01	1.29	.03	.01
	Procedural Justice x Coworker Commitment		.24	.01			
	Distributive Justice x Coworker Commitment		-.00	.01			
	Perceived Coworker Support		.17†	.06			

Note. N = 173, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † p <.10, * p < .05, ** p < .01

Table 10

Summary of Hierarchical Multiple Regression Analysis for Moderation Effects of Coworker Commitment on Coworker Justice Predicting Supervisory Ratings of Job Performance

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				2.79*	.05	
	Interactional Justice	.22	.17			
	Procedural Justice	.77*	.17			
	Distributive Justice	-.39	.13			
Step 2				2.58*	.06	.06**
	Coworker Commitment	.45	.16			
Step 3				2.14*	.08	.025
	Interactional Justice x Coworker Commitment	-.46	.04			
	Procedural Justice x Coworker Commitment	-1.03†	.04			
	Distributive Justice x Coworker Commitment	.75†	.03			

Note. N = 174, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 11

Summary of Hierarchical Multiple Regression Analysis for Moderation Effects of WG-Identification With Coworker on Coworker Justice Predicting Perceived Coworker Support

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				5.22*	.03	
	Team Size	-.08†	.10			
Step 2				80.58**	.66	.63**
	Interactional Justice	1.15†	.74			
	Procedural Justice	1.44*	.65			
	Distributive Justice	-1.95*	.59			
Step 3				66.20**	.66	.01†
	Coworker WG-Identification	.24	.45			
Step 4				44.11**	.68	.02*
	Interactional Justice x Coworker WG-Identification	-.94	.11			
	Procedural Justice x Coworker WG-Identification	-1.57†	.10			
	Distributive Justice x Coworker WG-Identification	2.66**	.09			

Note. N = 174, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 12

Summary of Multiple Regression Analysis for Coworker Support Mediating Coworker WG-Identification Moderating Coworker Justice Predicting OCB Beneficial to Coworker

Equation	Independent	Dependent	β	se β	F	R^2	ΔR^2
1	Interactional Justice x Coworker WG-Identification	Perceived Coworker Support	.34**	.01	99.23**	.64	
	Procedural Justice x Coworker WG-Identification		.06	.01			
	Distributive Justice x Coworker WG-Identification		.49**	.01			
2	Interactional Justice x Coworker WG-Identification	OCB Beneficial to Coworker	-.12	.01	1.53	.03	
	Procedural Justice x Coworker WG-Identification		.26*	.01			
	Distributive Justice x Coworker WG-Identification		-.04	.01			
3	Interactional Justice x Coworker WG-Identification	OCB Beneficial to Coworker	-.12	.01	1.15	.03	
	Procedural Justice x Coworker WG-Identification		.26*	.01			
	Distributive Justice x Coworker WG-Identification		-.03	.01			
	Perceived Coworker Support		-.02	.10			

Note. N = 174, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † p <.10, * p < .05, ** p < .01

Table 13

Summary of Hierarchical Multiple Regression Analysis for Moderating Effects of Coworker WG-Identification on Coworker Justice Predicting OCB Beneficial to Coworker

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				$1.94^{\dagger}$	.03	
	Interactional Justice	-2.51^{*}	.95			
	Procedural Justice	.21	.84			
	Distributive Justice	$2.15^{\dagger}$	.77			
Step 2				2.80^{**}	.06	$.03^{**}$
	Coworker WG-Identification	$-.60^{\dagger}$	.58			
Step 3				2.31^{**}	.09	$.03^{\dagger}$
	Interactional Justice x Coworker WG-Identification	2.93^{*}	.14			
	Procedural Justice x Coworker WG-Identification	.04	.13			
	Distributive Justice x Coworker WG-Identification	$-2.37^{\dagger}$	.11			

Note. N = 174, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 14

Summary of Multiple Regression Analysis for Coworker Support Mediating Coworker WG-Identification Moderating Coworker Justice Predicting Satisfaction With Coworker

Equation	Independent	Dependent	β	se β	F	R^2	ΔR^2
1	Interactional Justice x Coworker WG-Identification	Perceived Coworker Support	.34**	.01	99.23**	.64	
	Procedural Justice x Coworker WG-Identification		.06	.01			
	Distributive Justice x Coworker WG-Identification		.49**	.01			
2	Interactional Justice x Coworker WG-Identification	Satisfaction With Coworker	.31**	.01	64.10**	.53	
	Procedural Justice x Coworker WG-Identification		.26**	.01			
	Distributive Justice x Coworker WG-Identification		.24**	.01			
3	Interactional Justice x Coworker WG-Identification	Satisfaction With Coworker	.19*	.01	57.90**	.58	.05**
	Procedural Justice x Coworker WG-Identification		.24**	.01			
	Distributive Justice x Coworker WG-Identification		.07	.01			
	Perceived Coworker Support		.36**	.05			

Note. N = 173, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † p <.10, * p < .05, ** p < .01

Table 15

Summary of Multiple Regression Analysis for Coworker Support Mediating Coworker WG-Identification Moderating Coworker Justice Predicting Ratings of Job Performance

Equation	Independent	Dependent	β	se β	F	R^2	ΔR^2
1	Interactional Justice x Coworker WG-Identification	Perceived Coworker Support	.34**	.01	99.23**	.64	
	Procedural Justice x Coworker WG-Identification		.06	.01			
	Distributive Justice x Coworker WG-Identification		.49**	.01			
2	Interactional Justice x Coworker WG-Identification	Supervisory Ratings of Job Performance	-.06	.01	2.00†	.03	
	Procedural Justice x Coworker WG-Identification		.21†	.01			
	Distributive Justice x Coworker WG-Identification		.03	.01			
3	Interactional Justice x Coworker WG-Identification	Supervisory Ratings of Job Performance	-.08	.01	1.55†	.04	.01
	Procedural Justice x Coworker WG-Identification		.20†	.01			
	Distributive Justice x Coworker WG-Identification		-.00	.01			
	Perceived Coworker Support		.06	.05			

Note. N = 173, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 16

Summary of Hierarchical Multiple Regression Analysis for Moderating Effects of Coworker WG-Identification on Coworker Justice Predicting Supervisory Ratings of Job Performance

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				.39	.00	
	Interactional Justice	-3.37**	.64			
	Procedural Justice	.22	.56			
	Distributive Justice	1.90†	.51			
Step 2				2.46*	.06	.05*
	Coworker WG-Identification	-.93**	.39			
Step 3				2.63**	.10	.05*
	Interactional Justice x Coworker WG-Identification	3.98**	.10			
	Procedural Justice x Coworker WG-Identification	-.03	.09			
	Distributive Justice x Coworker WG-Identification	-2.04†	.08			

Note. N = 174, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 17

Summary of Hierarchical Multiple Regression Analysis for Moderation Effects of Supervisory Commitment on Supervisory Justice Predicting OCB Beneficial to Supervisor

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				5.97**	.10	
	Gender	.18*	.19			
	Age (20-35)	.18*	.24			
	Age (36-50)	-.02	.21			
Step 2				4.72**	.15	.05*
	Interactional Justice	-.73*	.38			
	Procedural Justice	.85	.33			
	Distributive Justice	-.02	.25			
Step 3				4.89**	.18	.03*
	Supervisory Commitment	-.21	.37			
Step 4				4.29**	.21	.04†
	Interactional Justice x Supervisory Commitment	1.82*	.09			
	Procedural Justice x Supervisory Commitment	-1.41*	.07			
	Distributive Justice x Supervisory Commitment	.05	.06			

Note. N = 170, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 18

Summary of Hierarchical Multiple Regression Analysis for Moderation Effects of Supervisory Commitment on Supervisory Justice Predicting Satisfaction With Supervisor

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				4.49**	.05	
	Age (20-35)	.01	.11			
	Age (36-50)	-.05	.10			
Step 2				63.26**	.65	.60**
	Interactional Justice	-.45*	.17			
	Procedural Justice	.78**	.15			
	Distributive Justice	.51**	.11			
Step 3				54.67**	.66	.01**
	Supervisory Commitment	-.22	.17			
Step 4				40.05**	.69	.03**
	Interactional Justice x Supervisory Commitment	1.57**	.04			
	Procedural Justice x Supervisory Commitment	-.98**	.03			
	Distributive Justice x Supervisory Commitment	-.24	.03			

Note. N = 170, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 19

Summary of Hierarchical Multiple Regression Analysis for Moderation Effects of WG-Identification With Supervisor on Supervisory Justice Predicting OCB Beneficial to Supervisor

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				5.97**	.10	
	Gender	.19*	.19			
	Age (20-35)	.20*	.23			
	Age (36-50)	-.01	.21			
Step 2				4.72**	.15	.05*
	Interactional Justice	-1.70**	.50			
	Procedural Justice	.86†	.51			
	Distributive Justice	.69†	.36			
Step 3				4.11**	.15	.00
	Supervisor WG-Identification	-1.02**	.36			
Step 4				4.86**	.24	.08**
	Interactional Justice x Supervisor WG-Identification	3.29**	.09			
	Procedural Justice x Supervisor WG-Identification	-1.29†	.09			
	Distributive Justice x Supervisor WG-Identification	-.79	.06			

Note. N = 170, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Table 20

Summary of Hierarchical Multiple Regression Analysis for Moderation Effects of WG-Identification With Supervisor on Supervisory Justice Predicting Satisfaction With Supervisor

Equation	Variable	β	se β	F	R^2	ΔR^2
Step 1				3.30**	.06	
	Gender	.08*	.09			
	Age (20-35)	.03	.11			
	Age (36-50)	-.06	.10			
Step 2				52.75**	.66	.60**
	Interactional Justice	-.78**	.23			
	Procedural Justice	1.36**	.24			
	Distributive Justice	.45†	.17			
Step 3				44.94**	.66	
	WG-Identification With Supervisor	-.25	.17			
Step 4				36.36**	.70	.04**
	Interactional Justice x Supervisor WG-Identification	1.87**	.04			
	Procedural Justice x Supervisor WG-Identification	-1.72**	.04			
	Distributive Justice x Supervisor WG-Identification	-.05	.03			

Note. N = 170, β = standardized regression coefficients after all variables have been entered into the regression equation, se β = std error, ΔR^2 = change in R^2, † $p < .10$, * $p < .05$, ** $p < .01$

Figure Captions

Figure 1. Model from Byrne and Cropanzano (2000).

Figure 2. Mediation (top figure) and Moderation (bottom figure).

Figure 3. Hypothesized model.