

A Multi-Foci Integration of Justice, Commitment,
and Positive Affective Well-Being

By
Edith C. Knight

A Thesis Submitted to
Saint Mary's University, Halifax, Nova Scotia
in Partial Fulfillment of the Requirements for
the Degree of Master of Science in Applied Psychology.

August, 2009, Halifax, Nova Scotia

Copyright by Edith C. Knight, 2009

Approved: _____
Camilla M. Holmvall, Ph.D.
Primary Supervisor

Approved: _____
James E. Cameron, Ph.D.
Supervisory Committee Member

Approved: _____
E. Kevin Kelloway, Ph.D.
Supervisory Committee Member

Approved: _____
Damian F. O'Keefe, CD, Ph.D.
External Examiner

Date: August 18, 2009



Library and Archives
Canada

Published Heritage
Branch

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque et
Archives Canada

Direction du
Patrimoine de l'édition

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence
ISBN: 978-0-494-55987-1
Our file Notre référence
ISBN: 978-0-494-55987-1

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.


Canada

A Multi-Foci Integration of Justice, Commitment,
and Positive Affective Well-Being

by Edith C. Knight

Abstract

Little research has linked the broad constructs of justice, commitment, and health in an integrated framework. To begin to address this gap, I drew on the target similarity model (Lavelle, Rupp, & Brockner, 2007) to integrate multi-foci justice and multi-foci commitment. In response to calls for incorporating positive psychological constructs into research (Seligman & Csikszentmihalyi, 2000), I also included a measure of positive affective well-being. I used Structural Equation Modeling to analyze survey data ($N = 305$) from a military sample. CFA results supported a six factor model of justice (distributive, procedural, supervisor interpersonal, supervisor informational, coworker interpersonal, and coworker informational) and a three factor model of commitment (organizational, supervisor, and coworker). Results also provided partial support for the multi-foci framework. Distributive and procedural justice predicted organizational commitment; supervisor informational justice predicted supervisor commitment; and coworker interpersonal and informational justice predicted coworker commitment. Organizational affective commitment mediated the relationships between distributive and procedural justice and positive affective well-being. Direct links were also found between distributive and supervisor informational justice and positive affective well-being. Limitations and implications of this research are discussed.

September 18, 2009

Table of Contents

Abstract	2
List of Tables	5
List of Figures	6
Acknowledgments.....	7
Introduction.....	8
The Structure of Justice Judgements	11
Hypothesis 1	13
Multi-Foci Justice.....	14
Social Exchange Relationships.....	15
Affective Commitment	16
Commitment Foci.....	17
Hypothesis 2	18
Justice and Affective Commitment	18
Hypothesis 3	19
Hypothesis 4	20
Hypothesis 5	20
Well-Being	20
Commitment and Well-Being.....	21
Hypothesis 6	23
Justice and Well-Being.....	23
Hypothesis 7	24
Summarizing Remarks	24

Context of the Research.....	25
Method	26
Participants	26
Procedure	27
Measures.....	28
Results.....	30
Data Screening and Cleaning	30
Structural Equation Modeling	32
The Measurement Models	33
The Structural Model.....	39
Discussion	42
Possible Practical Implications.....	48
Limitations.....	50
Future Research	51
Conclusion.....	54
References.....	56
Appendices.....	69
Footnotes.....	77
Tables.....	79
Figure Captions.....	87
Figures.....	88

List of Tables

Table 1. Descriptive Statistics for Justice, Commitment, and Positive Affective Well-Being Scales

Table 2. Fit Indices for Competing Justice Measurement Models

Table 3. Fit Indices for Competing Commitment Measurement Models

Table 4. Item Parcel Composition

Table 5. Fit Indices for the Competing Path Models

Table 6. Fit Indices for the Trimmed and Untrimmed Partial Mediation Path Models

List of Figures

Figure 1. Multi-foci Model of Justice, Commitment, and Positive Affective Well-Being

Figure 2. Six-Factor Justice Measurement Model

Figure 3. Three-Factor Commitment Measurement Model

Figure 4. The Full Parceled Measurement Model

Figure 5. Fully Mediated Structural Model

Figure 6. Partially Mediated Structural Model

Figure 7. Unmediated Structural Model

Figure 8. Trimmed Partially Mediated Structural Model

Acknowledgments

I am very proud of this thesis and can say without a doubt, it would not have materialized to the same degree of quality without the time invested from my amazing supervisor, Dr. Camilla Holmvall. I approached her late in the program after my previous supervisor accepted employment in another province. Her willingness to take me on as a student at the last minute was a pleasant surprise. Camilla's dedication to my project, despite juggling a plethora of projects, was impressive, especially when I consider the thorough and fast feedback she provided. Always friendly and fun natured, Camilla was truly a pleasure to work with. I greatly appreciate the time, effort, and consideration I was given by Camilla and also by the members of my committee, Dr. Kevin Kelloway, and Dr. Jim Cameron, and my external examiner, Lieutenant-Colonel Damian O'Keefe. I would like to thank Major Cindy Suurd wholeheartedly for her coordination efforts in administrating the Unit Morale Profile. Without her support, the data collection process would not have been possible. As they were integral to the project, I would like to thank and acknowledge the anonymous Commanding Officer and all of the CF/DND employees who dedicated their time to participate in this study. Lastly, I would like to thank my spouse, Shannon, for waiting patiently in Ontario for me to come home.

***Note.* The opinions expressed in this document are those of the author and do not necessarily represent the opinion of the Canadian Forces or the Department of National Defence. I would like to thank the Director General Military Personnel Research and Analysis (DGMPRA) of the Department of National Defence for sponsoring this study.**

A Multi-Foci Integration of Justice, Commitment,
and Positive Affective Well-Being

The study of justice has proliferated over the years due in part to the importance of justice perceptions for predicting employee and organizational outcomes such as: job satisfaction, job performance, trust, withdrawal behaviours, burnout, strain, and turnover (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Riolli & Savicki, 2006). Broadly speaking, justice research examines employees' perceptions of fairness in the workplace. A wealth of research suggests that employees' perceptions of fairness are formed, in part, based on judgements made about actions originating from the organization and/or supervisors (Lavelle, Rupp, & Brockner, 2007). For example, when organizations have fair and transparent promotion policies in place, employees are more likely to perceive the organization as fair. Similarly, when supervisors treat subordinates with dignity and respect, subordinates tend to perceive their supervisor as being fair (Lavelle et al., 2007). Thus, organizations and supervisors are two sources employees use to form fairness judgements about their workplace. Recently, researchers have also considered coworkers (Branscombe, Spears, Ellemers, & Doosje, 2002; Cropanzano, Li, & James, 2007; Donovan, Drasgow, & Munson, 1998; Lavelle et al., 2007; Lim, Cortina, & Magley, 2008) and customers (Holmvall & Sidhu, 2007; Rupp & Cropanzano, 2002; Rupp, McCance, Spencer, & Sonntag, 2008; Rupp & Spencer, 2006) as sources of fairness judgements. Recognition that multiple sources of fairness perceptions exist within organizations has led to a new multi-foci framework of justice (Lavelle et al., 2007).

In response to the multi-foci framework, researchers have examined the specific processes involved in the formation of justice judgements for different foci and have

linked outcomes to corresponding foci (Masterson, Lewis, Goldman, & Taylor, 2000; Moorman, Blakely, & Niehoff, 1998; Rupp & Cropanzano, 2002). Various mediating variables have been found to explain the relationships between justice perceptions of a specific focus (e.g., the supervisor) and respective outcomes. These mediating variables include social exchange processes such as perceived organizational support (POS), leader member exchange (LMX), and perceived supervisor support (PSS). Specifically, justice originating from the organization results in feelings of perceived organizational support (POS), which predicts employee attitudes and behaviours directed toward the organization; similarly, justice from supervisors predicts perceptions of leader-member exchange and support, which predict employee attitudes and behaviours directed toward supervisors (Masterson et al., 2000; Moorman et al., 1998; Rupp & Cropanzano, 2002). Overall then, research supports the notion that perceptions of fairness of a specific source predicts employee attitudes and behaviours toward that source. In the current research, I integrated the role of coworker justice, in addition to justice from supervisors and the organization, in the prediction of important work and employee health outcomes.

One important outcome variable that has been linked to employees' fairness perceptions in the workplace is organizational commitment. For example, when employees perceive they are treated fairly and are supported by their organization, they feel stronger levels of attachment to their organization in the form of affective commitment (Liao & Rupp, 2005). Similar to multi-foci justice research, commitment research has explored outcomes of commitment toward various sources (foci) in the workplace, such as the organization, supervisors, workgroups, and customers (Becker, 1992; Riketta & Van Dick, 2005; Stinglhamber, Bentein, & Vandenberghe, 2002;

Vandenberghe, Bentein, Michon, Chebat, Tremblay, & Fils, 2007; Vandenberghe, Bentein, & Stinglhamber, 2004). Despite the fact that research has explored both multi-foci justice and multi-foci commitment, little research has been done to integrate these models. In this research, I examined the link between employee perceptions of justice from the organization, supervisors, and coworkers, and affective commitment to these entities.

Well-being has also come to be an important area of study in recent years. For instance, Seligman and Csikszentmihalyi (2000) promote a positive psychological perspective that examines positive healthy attitudes in the workplace, such as hope, creativity, and resiliency. Moreover, they posit that a new approach to psychological research is required to counterbalance the focus on pathology in the current literature. In response to this call, I integrated positive affective well-being, a subjective valuation of health, into my research model.

Perceptions of justice and affective commitment have both been linked to health outcomes in the workplace (e.g. Herrbach, 2006; Lim et al., 2008; Van Katwyk, Fox, Spector, & Kelloway, 2000); however, little research has been done linking these three broad constructs (i.e., justice, commitment, and health) in an integrated framework. Drawing on the target-similarity model (Lavelle et al., 2007) and multi-foci justice and commitment research, I sought to begin to address this gap in the literature. Figure 1 depicts the hypothesized multi-foci model of justice, commitment, and health (assessed via positive affective well-being). In the following sections, I review the background theory and research that forms the basis of my model and specific hypotheses.

The Structure of Justice Judgements

Justice has been a topic of interest for more than seventy years. Initial research efforts began with the measurement of perceived fairness pertaining to the distribution of rewards in the workplace (i.e., distributive justice; Alexander & Ruderman, 1987).

Adam's equity theory (1965) suggests that in making distributive justice judgements, people compare their own input to outcome ratio with that of relevant others in the workplace. Distributive justice exists when one's own input/outcome ratio is similar to that of comparison others (Cropanzano, Byrne, Bobocel, & Rupp, 2001).

Another facet of justice emerged in the literature that sought to measure perceptions of fairness pertaining to the rules and policies that *determine* the way in which rewards are allocated (procedural justice). Procedural justice refers to judgements made concerning equitable, unbiased processes that help regulate fair outcomes in the workplace, such as promotions (Colquitt, 2001). Leventhal's (1980) model of procedural justice captures perceptions of fairness through the examination of specific criteria including: consistency, bias suppression, accuracy, correctability, representativeness, and adherence to ethical and moral standards. Consistency refers to the degree to which peers are evaluated across the same criteria, whereas bias suppression refers to the absence of supervisor favouritism toward certain subordinates. Accuracy implies that appropriate information is used to formulate decisions, and correctability deals with the acknowledgment of errors and the actions taken to correct those errors.

Representativeness reflects the degree to which decisions are carefully considered and representative of all affected parties. To meet Leventhal's criterion for procedural justice,

all of the aforementioned rules must be met with the addition of adherence to established ethical and moral standards.

The quality of communication, and the way people are treated interpersonally, also impact people's judgements of fairness in the workplace (Bies & Shapiro, 1987). Bies and Moag (1986) expanded on the facets of distributive and procedural justice by introducing the concept of interactional justice. Interactional justice typically deals with employee judgements regarding the treatment received from managers and supervisors in the workplace. For example, the sincerity and consideration displayed in the delivery of bad news and the degree to which explanations are provided that recognize employees' needs for dignity and respect, reflect employees' experiences of interactional justice (Bies & Moag, 1986). Greenberg (1993) suggested the division of interactional justice into informational and interpersonal facets, as originally conceptualized by Bies and Moag (1986). Interpersonal justice reflects the degree to which polite and respectful treatment is afforded individuals, whereas informational justice refers to the degree to which explanations are communicated in an honest, appropriate manner, and within a reasonable timeframe.

Evidence suggests a distinction exists between the four facets of justice. For example, Colquitt (2001) validated a four-factor scale of justice that included: distributive, procedural, informational and interpersonal justice. He found that the four-factor structure provided the best fit to the data over alternative models. Further support for this idea comes from a meta-analysis that confirmed that the four justice facets add incremental variance to fairness perceptions (Colquitt et al., 2001).

Interactional justice perceptions, for the most part, have dealt with employee perceptions of the treatment they receive from their supervisors. Coworkers experience close interpersonal contact with each other on a daily basis in most workplaces, and therefore might also be a source of interactional justice evaluations. Indeed, given that both the organization and supervisors are considered sources of justice perceptions, it stands to reason that coworkers might also form a source of justice perceptions. Support for this idea is given by Donovan et al. (1998; see also Cropanzano et al., 2001) who measured the interpersonal treatment employees receive from both supervisors and coworkers and found that both facets provided unique prediction of job satisfaction. Furthermore, given that interactional justice from supervisors can be parsed into interpersonal and informational justice facets (Greenberg, 1993), logically, coworkers might also be evaluated on their displays of both interpersonal and informational justice. With respect to the latter element of justice, employees may interact with coworkers to request explanations regarding work related matters and to obtain information needed to do their jobs. Indeed, research supports the importance of communication between coworkers and employee socialization in organizations (Louis, Posner, & Powell, 1983; Ostroff & Kozlowski, 1992). Coworker informational justice has not been studied to my knowledge; doing so is a unique contribution to the research literature. Based on the aforementioned research and rationale, I expected that a confirmatory factor analysis would confirm a six-factor model of justice, such that:

Hypothesis 1. Justice judgements will comprise six facets: distributive, procedural, interpersonal supervisor, informational supervisor, interpersonal coworker, and informational coworker.

Multi-Foci Justice

As noted earlier, research has predominantly examined justice evaluations concerning the organization and the supervisor. Perceptions of justice of various sources, such as organizations, supervisors, coworkers, and customers, are associated with different antecedents and outcomes (Donovan et al., 1998; Holmvall & Sidhu, 2007; Rupp & Cropanzano, 2002; Rupp et al., 2008). However, only a small amount of research has examined coworkers as a source of justice evaluations (Branscombe et al., 2002; Cropanzano et al., 2007; Donovan et al., 1998; Lavelle et al., 2007; Lim et al., 2008).

A growing trend in the justice literature is to measure variables across different sources, referred to as multi-foci justice (Lavelle et al., 2007). Research supports the idea that justice from a particular source predicts attitudes and behaviours toward the source (Lavelle et al., 2007). Specifically, justice originating from the organization in the form of distributive and procedural justice predicts attitudes and behaviours directed toward the organization (Wayne, Shore, Bommer, & Tetrick, 2002). Likewise, justice from the supervisor in the form of interpersonal and informational justice predicts attitudes and behaviours directed toward the supervisor (Choi, 2008). For example, research has shown that procedural justice predicts organizational commitment and organization-directed citizenship behaviours, whereas interactional justice predicts supervisor-directed citizenship behaviours (Masterson et al., 2000). Logically, justice from coworkers might similarly predict attitudes and behaviours directed toward coworkers. A theoretical explanation of these patterns of relationships follows.

Social Exchange Relationships

Explaining the relationships between the justice facets and various outcomes through social exchange processes is of growing interest in the justice literature. In line with social exchange theory (Blau, 1964), perceiving justice from a source may lead employees to feel valued, respected and supported by the source (Masterson et al., 2000; see also Lind & Tyler, 1988). Indeed, some work has begun to examine social exchange processes and has found that perceptions of support and the quality of the social exchange relationship mediate the relationship between justice from a given source and attitudes and behaviours directed toward the source. For example, Masterson et al. (2000) found that leader-member exchange or LMX (the quality of relationship between a subordinate and leader; Graen & Scandura, 1987), mediated the relationship between interactional justice and both job satisfaction and supervisor-directed organizational citizenship behaviours (OCBs). In the same study, perceived organizational support or POS (an employee's belief that the organization cares about his or her well-being; Eisenberger, Huntington, Hutchison, & Sowa, 1986), partially mediated the relationship between procedural justice and organizational commitment. In short, work-related attitudes and behaviours are influenced by employee judgements regarding the fairness of the treatment they receive from different foci (e.g., organization, supervisor), at least in part because of what such treatment communicates about the quality and supportiveness of the relationship (e.g., LMX, POS).

As noted earlier, employees are also likely to make fairness judgements in relation to how they are treated by their coworkers (Branscombe et al., 2002; Cropanzano et al., 2007; Donovan et al., 1998). For example, if coworkers treat an employee with

dignity and respect (coworker interpersonal justice) and communicate important work-related information in a timely manner (coworker informational justice) the employee is likely to form attitudes and behaviours directed toward his or her coworkers based on such treatment. One might expect that the quality of relationship shared between coworkers would mediate the relationship between coworker fairness judgements and coworker directed attitudes, such as coworker commitment. In line with social exchange theory (Blau, 1964), the greater the support and the better quality the relationship one has with entities in the workplace, the greater one's emotional attachment to, and identification with, the entity (Lind & Tyler, 1988; Masterson et al., 2000). This logic may explain why an important outcome of justice perceptions is affective commitment (Cohen-Charash, & Spector, 2001; Colquitt, 2001; Meyer, Stanley, Herscovitch, & Topolnysky, 2002).

Affective Commitment

Affective organizational commitment refers to feelings of positive attachment and belongingness that keep people engaged and wanting to remain with the organization (Allen & Meyer, 1990). Allen and Meyer (1990) developed a three component model of organizational commitment consisting of affective, continuance, and normative commitment facets. Continuance commitment reflects the degree to which people stay involved due to the lack of other available alternatives or accumulated "side-bets", whereas normative commitment measures the degree to which people remain in the organization due to their personal or moral values that would induce guilt at the thought of leaving. Allen and Meyer's commitment scales (1990) are widely used today. Though they have undergone some revision since 1990, there has been largely positive validity

evidence supporting Allen and Meyer's (1990) three component model (Dunham, Grube, & Castañeda, 1994; Irving, Coleman, & Cooper, 1997; Lee, Allen, Meyer, & Rhee, 2001). Affective commitment taps into feelings of emotional attachment and identification with the organization, and is reflected in higher levels of workgroup and organizational satisfaction (Riketta & Van Dick, 2005). Affective commitment has also been positively correlated with management receptiveness ($r = .48$), organizational dependability ($r = .61$), organizational support ($r = .64$), and support from supervisors ($r = .43$; Allen & Meyer, 1996). These findings suggest that when employees feel their supervisors and organizations are receptive, dependable, and supportive, they experience feelings of attachment and identification toward the organization. It is also noteworthy that low levels of affective organizational commitment lead to turnover intentions (Kammeyer-Mueller, Wanberg, Glomb, & Ahlburg, 2005). Of the three components of Allen and Meyer's (1990) model, affective commitment is known to be the most reliable and shows the strongest relationships with important employee and organizational outcomes (Cohen, 1996; Luchak & Gellatly, 2007). It was therefore chosen as the focus of the current research.

Commitment Foci

As with the justice literature, researchers have measured different foci of commitment. Ideas surrounding multi-foci aspects of commitment were put forward in the 1980s and tested a decade later in a meta-analysis by Mathieu and Zajac (1990). The foci acknowledged at that time were the occupation and the union. Becker (1992) also found evidence for multiple foci of commitment (top management, supervisor, and workgroup) that provided unique prediction beyond an overall commitment measure.

Broadly speaking, foci of commitment have included the: organization, occupation, supervisor, workgroup, and customer (Becker, 1992; Riketta & Van Dick, 2005¹; Stinglhamber et al., 2002; Vandenberghe et al., 2004; Vandenberghe et al., 2007).

Specific to affective commitment, Vandenberghe and colleagues (2004) examined three foci (organization, supervisor, and workgroup) and found unique variance for each in the prediction of job performance and intent to quit. Den Hartog and Belschak (2007) performed a confirmatory factor analysis for a four-factor model of affective commitment that included the: organization, supervisor, workgroup, and career. The four-factor model proved to be the best fitting model compared to alternatives of three, two, and one-factor models, providing evidence for distinguishing between multi-foci commitment entities. In light of these findings, I proposed the following hypothesis:

Hypothesis 2. Affective commitment will comprise three facets: organization, supervisor, and coworker.

Justice and Affective Commitment

Little research has tied multi-foci justice to multi-foci affective commitment, though research has examined the link between particular justice facets and affective organizational commitment. For example, in a meta-analysis of 190 studies, it was found that procedural justice ($r = .50$) and distributive justice ($r = .47$) were somewhat more strongly related to affective organizational commitment than was interactional justice ($r = .38$; Cohen-Charash, & Spector, 2001). Similarly, in the Colquitt et al. (2001) meta-analysis, distributive ($r = .42$) and procedural justice ($r = .48$) were highly correlated with organizational commitment, whereas interpersonal ($r = .16$) and informational ($r = .26$) justice demonstrated weaker correlations with organizational commitment. In a meta-

analysis of commitment by Meyer et al. (2002) affective commitment was correlated with interactional justice: $r = .50$; distributive justice: $r = .40$; and procedural justice: $r = .38$.

Across all meta-analyses, procedural, distributive, and interactional justice shared variance with organizational commitment, though the strengths of the relationships seemed to vary somewhat. Much research then has confirmed that justice predicts organizational commitment (Colquitt et al., 2001; Folger & Konovsky, 1989; Kacmar, Carlson, & Brymer, 1999; Lambert, Hogan, & Griffin, 2007). Colquitt (2001) also examined the links between distributive justice, supervisor-referenced procedural, interpersonal, and informational justice, and workgroup commitment. He found that procedural, interpersonal, and informational justice were positively correlated with employee ratings of workgroup commitment (at $r = .46$; $r = .24$; and $r = .38$, respectively) with procedural and informational justice showing the strongest links.

Research suggests that different foci of justice predict different foci of outcome variables (Lavelle et al., 2007; Masterson et al., 2000). Therefore, within a multi-foci framework, it was expected that justice from the organization in the form of procedures and outcomes (i.e., distributive and procedural justice) would predict employees' affective attachment to the organization. Similarly, justice from supervisors in the form of interpersonal treatment (i.e., informational and interpersonal justice) was expected to predict employees' affective attachment to the supervisor. Lastly, justice from coworkers in the form of interpersonal treatment (i.e., informational and interpersonal justice) was expected to predict employees' affective attachment to their coworkers. Thus, in line with previous research and theory, I proposed the following three additional hypotheses:

Hypothesis 3. Distributive justice and procedural justice will predict affective

commitment to the organization.

Hypothesis 4. Interpersonal and informational justice from supervisors will predict affective commitment to the supervisor.

Hypothesis 5. Interpersonal and informational justice from coworkers will predict affective commitment to coworkers.

Well-Being

Well-being can be considered across a broad spectrum from subjective evaluations to empirical measures of mental and physical health. It has been shown that psychological well-being is associated with reduced negative physical health symptoms (Pisarski, Lawrence, Bohle, & Brook, 2008). Psychological health can be assessed in terms of one's subjective well-being, which refers to one's cognitive and affective life valuation (Diener, 2000). In the current research, I assessed the way a person thinks and feels about his or her own well-being by measuring positive affective well-being.

Positive affect reflects one's emotional state as described by positive emotions such as: enthusiasm, inspiration and pride. Conversely, negative affect reflects one's emotional state as described by emotions such as: anxiousness, nervousness, and shame (Herrbach, 2006). Positive affect is associated with better health and well-being (Diener, 2000; Jones, O'Connor, Conner, McMillan, & Ferguson, 2007; Salovey, Rothman, Detweiler, & Steward, 2000) and reduced levels of exhaustion and tension at work (Zellars, Perrewé, Hochwarter, & Anderson, 2006). In contrast, negative affect can contribute to depression (Kopp, Stauder, Purebl, Janszky, & Skrabski, 2007). Negative and positive affect elicit different physiological responses and are not simply opposite

ends of the same continuum (Fredrickson, 2001; Lykken, & Tellegen, 1996). Thus, it is important to study positive and negative affect as separate constructs.

Researchers have measured positive affective well-being in the workplace (Van Katwyk et al., 2000) and found that affective well-being at work is associated with lower levels of stressors and physical symptoms, and higher levels of job satisfaction (Van Katwyk et al., 2000). Potentially of particular interest to organizations is the finding that psychological well-being predicts job performance (Wright & Cropanzano, 2000); furthermore, positive affect is associated with increased organizational citizenship behaviours (Williams & Shiaw, 1999). Moreover, a recent meta-analysis found that positive affect is associated with higher income and job performance, and better health and longevity (Lyubomirsky, King, & Diener, 2005). With consideration of the aforementioned research, positive affective well-being may contribute not only to better job performance and organizational citizenship behaviours, but also to employee health and happiness.

Commitment and Well-Being

There has been recent interest in linking affective commitment to health and well-being. For example, affective commitment has been associated with improved job satisfaction and reduced levels of stress (Mathieu & Zajac, 1990). High levels of stress can have a negative impact on mental and physical health (Sonnentag & Frese, 2003). Affective organizational commitment has also been found to predict positive affect at work, even when dispositional affect is controlled (Herrbach, 2006). Herrbach (2006) suggests that affective states impact physiological processes, such that positive affect may be associated with improved health and well-being. Research evidence suggests that

positive affect can indeed lead to improved well-being, whereas negative affect can lead to reduced well-being (Jones et al., 2007).

The Positive Affective Well-being Scale (PAWS; Hess, Kelloway, Francis, Catano, & Fleming, 2008) is a measure of positive affect that asks respondents to rate their experienced frequency of positive emotions. There is scant research available proposing that affective commitment predicts positive affect or positive affective well-being. As noted above, Herrback's (2006) study is one exception. In this study, affective and continuance commitment were used as independent variables in the prediction of positive and negative affect. Affective organizational commitment was found to be positively correlated with positive affect ($r = .41$). The paucity of research linking affective commitment and affective well-being might be due to the fact that both variables are generally viewed as outcome measures. For example, Grawitch, Trares, and Kohler (2007) found initial evidence that employee involvement is an important variable in healthy workplaces that leads to affective commitment and well-being. Both affective commitment and general mental well-being were intercorrelated ($r = .31$), suggesting that strong affective commitment is associated with high levels of general mental health. Further, in a different study, direct links were found between team identity and physical health symptoms (Pisarski et al., 2008). Both involvement and identity are important aspects of the affective commitment construct, suggesting that there should be a relationship between affective commitment and well-being. Additional evidence of this relationship was put forward by LeBlanc and Kelloway (2002), who examined the effects of coworker aggression and found direct links to both emotional well-being and affective commitment; high levels of aggression predicted both lower levels of emotional well-

being and affective commitment. Furthermore, affective commitment was positively associated with both emotional well-being ($r = .37$) and psychosomatic well-being ($r = .26$). To my knowledge, no research to date has examined the unique contribution of organizational, supervisor, and coworker commitment in the prediction of affective well-being. I propose such a relationship with the following hypothesis:

Hypothesis 6. The three proposed affective commitment foci: organization, supervisor, and coworkers, will predict positive affective well-being.

Justice and Well-Being

There is a growing research literature that shows that justice perceptions contribute to employee health and well-being (e.g., Elovainio, Kivimäki, & Helkama, 2001; Francis, & Barling, 2005; Pisarski et al., 2008). One possible reason for such a finding may be explained by group value theory (Lind & Tyler, 1988). In line with this theory, justice may lead to positive emotional reactions and well-being because fair treatment leads employees to feel valued, respected, and accepted within their workplace. Feeling valued, respected and accepted by the employer (organization), supervisor, and coworkers should result in feelings of belongingness (Cropanzano et al., 2001), a core component of affective commitment. Thus, it seems reasonable to suggest that justice may lead to positive affective well-being through feelings of affective commitment to multiple entities within the workplace. Specifically, I predicted that justice from a source (organization, supervisors, coworkers), would predict commitment toward the respective source (organization, supervisors, coworkers), which would, in turn, predict positive affective well-being. No research has examined the mediating effect of multi-foci commitment in the relationship between multi-foci justice and subjective health

valuations (as measured via positive affective well-being). This prediction is captured by the following hypothesis:

Hypothesis 7. Multi-foci commitment variables will mediate the relationships between multi-foci justice variables and positive affective well-being.

Summarizing Remarks

The proliferation of research in both the justice and commitment literatures has not been linked together empirically within an integrated framework. Only recently have researchers attempted to integrate these constructs into an overall framework in an attempt to explain fully organizational variables in the workplace (i.e., the target-similarity model; Lavelle et al., 2007). I proposed a multi-foci integration of the justice and commitment constructs framed within the context of positive psychology (assessed via positive affective well-being) to address the lack of an all encompassing model in this area.

Indeed, justice and commitment foci have been measured in pairs, sets, or independently from one another, but without an overall integration effort. Lavelle et al. (2007) recently addressed this issue by proposing a theoretical framework that incorporates a multi-foci perspective across relevant variables. Specifically, Lavelle et al. (2007) proposed that justice, commitment and citizenship behaviours can be examined at a multi-foci level that includes: the organization, supervisors, and coworkers. To my knowledge, this proposed theoretical framework has not yet been tested. Lavelle et al. (2007) encourage researchers to be more precise in measuring multi-foci variables and to expand multi-foci research across other work-related constructs for a more comprehensive understanding of multi-foci relationships.

Before we can fully understand employee attitudes and behaviours within the context of their organizations, other links to justice and commitment foci need to be established with important outcome variables such as, health and well-being, turnover, and performance. The current research is novel in that it links multi-foci justice to multi-foci commitment and positive affective well-being. As such, this research addresses a component of Lavelle et al.'s target-similarity model and expands upon it by considering the outcome of positive affective well-being (2007).

Context of the Research

The current research was conducted using a sample of Canadian military personnel. This particular population is unique to many civilian organizations. However, it can be compared to large government bureaucracies, such as the Royal Canadian Mounted Police, the Canadian Coast Guard, and other large security and law enforcement agencies. Employees typically undergo a rigorous recruitment and selection process and are required to meet minimum medical, educational and fitness standards. Further, these groups accept a degree of personal sacrifice and risk to personal safety that sets this population apart from many civilian organizations.

Currently, the Canadian Forces is attempting to increase its enrolment by 1000 personnel each year (Recruiting and retention in the Canadian Forces, 2009). The demands of training and frequent postings make it difficult to retain members, once recruited. Many personnel exit the organization due to course failure, dissatisfaction, health concerns, better employment opportunities, or for retirement. Retention in the CF will likely always be a challenge due to the nature of the work which demands strenuous physical labour, hazardous and stressful working conditions, and personal sacrifice.

However, it is possible that if the organization could improve treatment of personnel (e.g., through justice), and thereby potentially improve levels of affective organizational commitment and positive affective well-being, retention might hopefully be enhanced.

Method

Participants

A sample of Canadian Forces (CF) military personnel from a single support unit were surveyed with the Unit Morale Profile (UMP; Riley, 2002), a survey tool designed to measure unit readiness and organizational effectiveness. Listwise deletion was used, as I was only interested in examining cases with complete records so that all analyses would be conducted with the same number of cases. Out of a raw sample size of 470, there were 30 respondents of civilian status. I removed the civilians from the data set because conducting a test of invariance would not be feasible with such a small sample size (Meade, Johnson, & Braddy, 2008). Another larger sub-set of the sample ($N = 103$) completed a French version of the survey. Out of the 103 respondents who filled out the French survey, 10 were civilian. Elimination of the civilians would result in a listwise French sample of $N = 81$. The French group could be combined with the larger group of data, provided a test of invariance demonstrated the groups were equal. However, one concern was that the survey was translated and I had no information on the validity of the French scales. The sample size for SEM for this sample was also quite small ($N = 81$), and quite different in size from the English survey sample ($N = 305$). Based on the aforementioned issues, and given the large English survey sample, the decision was made to use only the English survey military sample for the analysis ($N = 305$).

The variable for respondent age was categorical and ranged from 18-60. Fifty percent of the respondents were over the age of 41, 30% were between 31 and 40, and 20% were between 18 and 30. Most respondents were male (70%) and reported that their highest level of education completed was high school (46%). A smaller percentage had earned college diplomas (23%), or undergraduate degrees (23%). Six percent reported having completed a university graduate degree, whereas 2% reported none of the above. Most of the respondents (72%) had not experienced an operational tour within the last 5 years. Nineteen percent of respondents reported they had been on at least one operational tour in the last 5 years; nine percent had been deployed two or more times. The level of experience reported was broadly distributed; twelve percent reported having served 5 years or less in the Canadian Forces; 16% had served 6-10 years; 12% had served 11-15 years; 16% had served 16-20 years; 21% had served 21-25 years; and 23% reported having served 26 years or more.

Procedure

The Operational Effectiveness and Leadership Section (OEL) of the Director Military Personnel Operational Research and Analysis (DMPORA) coordinated survey administration of the Unit Morale Profile (UMP). The UMP (Riley, 2002) contained measures of the study constructs and is frequently requested by Commanding Officers (COs) for administration to their personnel in order to gain insight into how military units are operating with respect to their psychological well-being and military capability. Scales typically included in the UMP consist of communication, cohesion, role stressors, and confidence in leadership. There are core scales that make up the UMP as well as optional scales COs can choose at their discretion. With agreement from an unidentified

CO of a large support unit, the measures pertaining to this research were added as optional scales within the UMP survey. The UMP survey was converted to an electronic format and administered to the CO's unit. The introductory cover page (see *Appendix A*) provided information about the survey and explicitly stated that participation in the UMP survey was voluntary and also that aspects of the survey would be used for research purposes.

Measures

Distributive justice. Colquitt's four item scale (2001) was used to measure perceptions of distributive justice. The lead in for the scale is as follows: "The following items refer to the outcomes (e.g., pay, promotions) you receive at work. To what extent:" A sample item is "do your outcomes reflect the effort you have put into your work?" Items in all of the justice scales are rated using a 5-point Likert-type scale (1= to a very small extent; 5 = to a very large extent). The justice items are presented in *Appendix B*. Though not part of the core component of the UMP, all of the justice items included in *Appendix B* were used in a number of UMP administrations in 2008 (with the exception of five additional coworker informational justice items) and were adapted to fit the military context.

Procedural justice. Colquitt's (2001) seven-item scale was used to assess perceptions of procedural justice. The lead in for the scale is as follows: "The following items refer to the procedures used to arrive at your outcomes (e.g., pay, promotions). To what extent:" A sample item is "are decision-making procedures free of bias?"

Interpersonal supervisor justice. Colquitt's (2001) four-item scale was used to assess perceptions of interpersonal justice. The lead in for the scale is as follows: "The

following items refer to your supervisor. To what extent:" A sample item is "does your supervisor treat you in a polite manner?"

Informational supervisor justice. Colquitt's (2001) five-item informational justice scale was used to assess perceptions of informational justice. The lead in for the scale is as follows: "The following items refer to your supervisor. To what extent:" A sample item is "does your supervisor communicate details (e.g., about decisions and procedures) in a timely manner?"

Interpersonal coworker justice. Colquitt's (2001) interpersonal justice scale was adapted to measure coworker interpersonal justice. The lead in for the scale is as follows: "The following items refer to your coworkers. To what extent:" A sample item is "do your coworkers treat you in a polite manner?"

Informational coworker justice. Four of Colquitt's (2001) informational justice items were adapted to measure coworker informational justice. One additional item was adapted from De Dreu's (2007) information sharing scale (a six-item team communication measure). The lead in for the scale is as follows: "The following items refer to your coworkers. To what extent:" A sample item is "Do your coworkers explain the decisions they make that impact you?"

Organizational affective commitment. Meyer, Allen and Smith's (1993) six-item scale was used to assess organizational affective commitment. A sample item is "I do not feel "emotionally attached" to the CF/DND." Items in all of the commitment scales are rated using a 5-point Likert-type scale (1= completely disagree; 5 = completely agree). The affective commitment items are presented in *Appendix C*.

Supervisor affective commitment. Meyer et al.'s (1993) organizational affective commitment scale was adapted to measure supervisor affective commitment. A sample item is "I do not feel "emotionally attached" to my supervisor."

Coworker affective commitment. Meyer et al.'s (1993) organizational affective commitment scale was adapted to measure coworker affective commitment. A sample item is "I do not feel "emotionally attached" to my coworkers."

Positive affective well-being. The Positive Affective Well-Being Scale (PAWS; Hess et al., 2008) was developed based on the Job-Related Affective Well-Being Scale (JAWS), a psychological measure that taps into positive and negative feelings employees experience in the workplace (Van Katwyk et al., 2000). The PAWS contains only positive items and is context free in that it captures well-being in general and is not specific to the workplace. The PAWS consists of seven items from the high pleasure, high arousal JAWS subscales. Items ask respondents to rate on a 7-point Likert-type scale the frequency with which certain feelings occurred in the last six months ranging from "not at all" (1) to "all of the time" (7). A sample item for the PAWS measure is, "In the last six months, I have been feeling energetic." The PAWS items are included in *Appendix D*.

Results

Data Screening and Cleaning

Upon receipt of the data, preliminary steps involved data cleaning and verification of assumptions for the proposed data analysis, Structural Equation Modeling (SEM). Estimation methods for SEM assume multivariate normality, which requires that three assumptions are met: that all univariate distributions are normal; that joint distributions of

pairs of variables are bivariate normal; and that all bivariate scatterplots are linear and homoscedastic (Kline, 2005). I used SPSS software to look for data entry errors, to locate missing values, and to evaluate these assumptions. I inspected minimum and maximum values, means, and standard deviations, and all values were plausible.

One way to assess univariate normality is through examination of non-normal indicators, such as skew and kurtosis. Kline (2005) suggests that absolute values on the skew index over 3.0 are indicative of extreme skew; in contrast, absolute values exceeding 10.0 on the kurtosis index may be a problem and those over 20.0 are most definitely of concern. The compiled scales were analyzed for skew and kurtosis and most variables were extremely negatively skewed (-0.21 to -9.19). Most variables were minimally to moderately platykurtic (.05 to 6.90), though some were leptokurtic (-0.01 to -2.84).

There were 3 respondents with standardized *Z* scores greater than 4 on one or more variables that were considered univariate outliers. The decision was made to retain the outliers, as there were only 3 of them and the impact on the reliability analysis was minimal². Furthermore, it is reasonable to assume that the outliers are properly part of the population from which the sample was taken, as it is not unusual to find a few outliers among a large group (Tabachnick & Fidell, 2007)³. Bivariate plots were assessed with SPSS GRAPH to examine linearity and homoscedasticity and no concerns were identified. Examination of the correlation matrix also resulted in the conclusion that multicollinearity should not be a concern in this data set. Descriptive statistics, intercorrelations, and reliability estimates for all measurement scales are listed in Table 1. As can be seen, all variables were adequately reliable, with Cronbach's alphas ≥ 0.85 .

Structural Equation Modeling

Structural equation modeling (SEM) is a sophisticated and flexible collection of statistical techniques that permits examination of complex relationships among variables (Tabachnick & Fidell, 2007). A two-step SEM modeling approach was used (Anderson & Gerbing, 1988) using AMOS 7. The first part of the analysis involved using confirmatory factor analysis to test the proposed measurement model. Because the items contained in the factors were taken from established scales and/or derived from theory, confirmatory factor analysis was deemed appropriate (Tabachnick & Fidell, 2007). The second part of the SEM analysis consisted of using latent variable path analysis to test the proposed structural model.

There are a number of indices that can be used to evaluate the fit of the proposed measurement and structural models. Confirmatory factor analysis (CFA) and latent variable path analysis methods provide a chi-square statistic (χ^2), which is an estimate of the degree to which a proposed model fits the data by assessing the covariation between the observed variables and their linkage to the hypothesized underlying structure (Byrne, 1994). When the chi-square is non-significant, the model is said to fit the data. However, χ^2 is sensitive to sample size and can be excessively conservative (Meade et al., 2008). As such, there are other fit indices commonly used to evaluate differences in model fit. Tabachnick and Fidell (2007) recommend using the comparative fit index (CFI) as an indicator of good model fit, when the CFI meets or exceeds .95. The CFI used in combination with the root mean-square error of approximation (RMSEA) are considered very good indicators of model fit (Tabachnick & Fidell, 2007). RMSEA values less than .05 indicate close fit; values between .08 and .10 indicate a mediocre fit; and values

greater than .10 are considered a poor fit (Brown & Cudeck, 1993). Since RMSEA does not account for model complexity, a p-value (PCLOSE) is provided as a test of close fit (Brown & Cudeck, 1993). Specifically, PCLOSE indicates the probability of getting a sample RMSEA as large as reported, given the model complexity; thus, when PCLOSE is greater than .05, the model is said to have good fit. The Bentler-Bonett Normed Fit Index (NFI) is also useful to determine the incremental fit obtained in the evaluation of hierarchical step-up comparison models (when the NFI is less than .90 there is room for substantial improvement in model fit; Bentler & Bonett, 1980).

In light of the discussion above, I used the CFI combined with the NFI and RMSEA to evaluate model fit for both the measurement and structural models tested in the current study. Minor modifications to improve model fit would be appropriate on the newly created scales (e.g. affective coworker commitment, informational coworker justice) if there is a logical reason that remains in line with the underlying theory (Tabachnick & Fidell, 2007).

The Measurement Models

I ran separate confirmatory factor analyses (CFAs) in AMOS 7 for the justice and commitment measurement scales to assess model fit and evaluate Hypotheses 1 and 2. In each case, in order to evaluate the proposed factor structure, I first specified the measurement model, and then performed a model estimate to examine residuals, chi-square, fit indices, and R^2 statistics. I also compared my proposed models, using chi-square difference tests (Byrne, 1994), to a number of theoretically plausible alternatives.

Justice. All justice facets were allowed to correlate with each other, regardless of the model tested, since a meta-analysis of justice has demonstrated moderate to high

correlations (r s ranging from .27 to .68) between the 4 traditional justice facets (Colquitt et al., 2001). Items that were similar in wording were allowed to have their errors correlated to improve model fit. For example, items for interpersonal justice were similar for supervisors and coworkers (e.g., “Does your supervisor treat you with respect?”; “Do your coworkers treat you with respect?”). Some items for informational justice were also similar for supervisors and coworkers (e.g., “Is your supervisor candid in his/her communications with you?”; “Are your coworkers candid in their communications with you?”). Correlated items are identified in Figure 2, and scale acronyms to interpret correlated items can be found in Appendix E.

Using chi-square difference tests, I compared my hypothesized six-factor model of justice to six other theoretically plausible alternative models, to determine which model was the most parsimonious and also had the best fit. See Table 2 for the model fit estimates and results of the chi-square difference tests.

The six alternative models tested were as follows: Earlier conceptualizations of justice consisted of a three factor justice model comprising distributive, procedural and interactional justice facets (Colquitt et al., 2001). Therefore, a three-factor justice model was considered a viable option (the interactional justice facet was derived by combining supervisor and coworker interpersonal and informational justice into one factor). As discussed previously, supervisors and coworkers are sources from which justice perceptions can originate (Lavelle et al., 2007). As such, one might expect interactional justice to load onto two separate factors for supervisors and coworkers. Thus, I also tested a four factor model comprising distributive, procedural, interactional supervisor, and interactional coworker justice.

Given that interactional justice has been divided further into informational and interpersonal justice facets (Colquitt, 2001; Greenberg, 1993), an additional four-factor model was evaluated comprising distributive justice, procedural justice, supervisor and coworker interpersonal justice combined, and supervisor and coworker informational justice combined. There is also debate as to whether or not employees form global judgements of fairness based on treatment (justice events) or if employees form targeted judgements of fairness based on the source considered responsible for their treatment (Cropanzano et al., 2001; Lavelle et al., 2007). Thus, a three factor model consisting of organizational sources (distributive and procedural justice), management sources (supervisor interpersonal and informational justice) and peer sources (coworker interpersonal and informational justice) was evaluated.

Supervisors and managers may also be seen as representatives of the organization (Porter, Conlon, & Barber, 2004) and thus a two-factor model is also plausible. Therefore, a model that combined distributive justice, procedural justice, supervisor interpersonal justice, and supervisor informational justice as one facet (organizational sources), and coworker interpersonal and informational justice as a second facet was also evaluated. Finally, a one-factor justice model was also tested which would be akin to an aggregated overall justice construct.

As expected, the results of the chi-square difference tests demonstrated that the hypothesized six factor measurement model provided the best fit to the data in comparison to the competing models (see Table 2 and Figure 2; standardized parameter estimates are provided in all figures); the fit indices for the 6-factor model were as follows: $\chi^2(356, N = 305) = 863.23, p < .001$; NFI = .902, CFI = .939, RMSEA = .068, p

< .001. I examined the standardized parameter estimates that correspond to effect size estimates (Hoyle, 1995) and all were significant and in a positive direction. The weakest variable was item 7 for procedural justice, (“Do decision-making procedures uphold ethical and moral standards?”), accounting for 32% of variance in the solution.

Commitment. All commitment constructs were allowed to correlate with each other in the models tested. Moreover, items that were similar in wording were allowed to have their errors correlated to improve model fit. Specifically, organizational, supervisor and coworker commitment items were similarly worded across the scales and thus respective item errors were allowed to correlate (e.g., “I do not feel ‘emotionally attached’ to the CF/DND”; “I do not feel ‘emotionally attached’ to my supervisor”; “I do not feel ‘emotionally attached’ to my coworkers”).

As with the justice constructs, I conducted chi-square difference tests to compare the proposed 3-factor measurement model against two theoretically derived alternative models. See Table 3 for the model fit estimates and results of the chi-square difference tests. The two alternative models tested were as follows: As discussed previously, people can form broad organizational judgements based on their impressions from interactions with an organization’s representatives (e.g. recruiting officers; Porter et al., 2004). Thus, a two-factor commitment model was tested as a plausible alternative in which organizational commitment and supervisor commitment were combined together into one ‘organizational representative’ facet, and coworker commitment comprised the other facet. In addition, the conventional model of organizational commitment (as described in Becker, 1992), is unidimensional. Therefore, I also tested a one-factor model of commitment.

As expected, results of the chi-square difference tests (see Table 3) supported the proposed three factor commitment model (depicted in Figure 3) as the best fitting model. The fit indices were as follows: $\chi^2(114, N = 305) = 397.14, p < .001$; NFI = .879, CFI = .910, RMSEA = .090, $p < .001$. All standardized parameter estimates were significant and in a positive direction, with the weakest item, coworker commitment item 2 (“I really feel as if my coworkers’ problems are my own.”), accounting for 13.8% of the variance in the solution. Prior to testing the structural model, all measurement scales, including the positive affective well-being measure, were tested together in a CFA, allowing all sub-facets of justice, commitment, and the Positive Affective Well-Being scale to intercorrelate. The result was a poor fit, $\chi^2(1326, N = 305) = 2848.73, p < .001$; NFI = .827, CFI = .899, RMSEA = .061, $p < .001$.

As there were many estimated paths, it is not completely surprising that the model fit for the full measurement model was poor (Hoyle, 1995). One way to improve model fit for models with many estimated paths is by item parceling (Little, Cunningham, Shahar, & Widaman, 2002). Item parceling, which involves taking the average of two or more items within the same scale to form an aggregate-level indicator, was conducted on all measurement scales prior to testing the structural model to facilitate a better fit (Little et al., 2002). Item parceling for unidimensional scales has several advantages prior to testing a structural equation model (Little et al., 2002): fewer parameters are needed, leading to increased parsimony; model fit indices improve; and sampling error is reduced.

The first step in item parceling is to determine the factor structure of the measurement scales (Bandalos, 2002). I conducted exploratory factor analysis with principal axis factoring and oblique rotation (direct oblimin) on each of the constructs; all

items within their respective scales loaded on one factor, except for the coworker commitment scale, which had a two-factor structure. For the most part, each item parcel was formed using the internal consistency technique (Little et al., 2002) where parcels are constructed according to the item factor loadings. For example, distributive justice (a four-item scale), was parceled by taking the item with the highest factor loading and assigning it to the first parcel. Then, the item with the second highest factor loading was assigned to the second parcel. The parcels were then completed by adding the item with the lowest factor loading to the first parcel and the item with the second lowest factor loading to second parcel. In situations where there was an uneven number of items, such as with procedural justice (a seven-item scale), the last item (without a pair) was added to the third parcel in the set.

Further consideration had to be given to the items for which errors were allowed to correlate, so that item parcels could also be correlated in the structural model. For supervisor and coworker interpersonal justice facets, it was possible to use the internal consistency technique, while ensuring that the parcels contained matching items. However, I was unable to use the internal consistency technique for supervisor informational and coworker informational justice, because two of the items (items 1 and 5) with the lowest factor loadings needed to be in the same parcel in order to correlate the parcel errors. As these two items were forced into a parcel, the other three items in each set were, by default, forced into the second parcel.

Organizational commitment, supervisor commitment, and coworker commitment contained sets of six items that were similarly worded. Therefore, parcel errors needed to be correlated to improve model fit, and as a result, it was not always possible to assign

the highest factor loading to the first parcel, since all of the parcels needed to have matched content. To further complicate the parceling process, the coworker commitment scale broke down into two factors. Therefore, a combination of the internal consistency and domain-representative approach (Little et al., 2002) had to be used to form the parcels for coworker commitment.

The internal consistency technique was used to parcel the organizational commitment items, as this was the originally established and previously validated unidimensional scale. Once the organizational commitment scale items were assigned to parcels, all matching items were then assigned, by default, to the supervisor and coworker commitment scale parcels. It should be noted that the domain-representative approach was also verified to ensure that the two factors of the coworker commitment scale were equally represented across the three parcels, and this was indeed the case. Finally, the positive affective well-being parcels were formed using the internal consistency technique. Item parcel composition can be examined in Table 4 and parcel acronym interpretations can be found in Appendix E. Following building the item parcels, the full (parceled) measurement model was re-run (see Figure 4) and it demonstrated a very good fit to the data, $\chi^2(218, N = 305) = 399.00, p < .001$; NFI = .945, CFI = .974, RMSEA = .052, $p > .05$.

The Structural Model

When evaluating a mediated relationship such as that hypothesized in the current study, it is recommended that three models be tested: a fully mediated model, a partially mediated model, and an unmediated model (Kelloway, 1998). Using latent variable path analysis, I tested the structural paths for these three competing path models; for the fit

indices, see Table 5. Note that in all cases, the standardized path estimates are provided in the text and figures.

For the hypothesized full mediation model, depicted in Figure 1, organizational affective commitment was expected to mediate the paths between distributive and procedural justice, and positive affective well-being; supervisor affective commitment was expected to mediate the paths between supervisor interpersonal and informational justice, and positive affective well-being; finally, coworker affective commitment was expected to mediate the paths between coworker interpersonal and informational justice and positive affective well-being. The hypothesized fully mediated structural model (see Figure 5) was compared using a chi-square difference test (Tabachnick & Fidell, 2007) against a partially mediated structural model (Figure 6; in which the justice facets were also directly linked to positive affective well-being). The partially mediated structural model was also compared using a chi-square difference test against an unmediated structural model (see Figure 7; in which the justice facets were directly linked to both their respective commitment facets and to positive affective well-being, but no links were modeled between commitment and well-being).

Although the hypothesized fully mediated structural model fit the data well, the chi-square difference test between the fully mediated model and the partially mediated model was significant: $\chi^2_{\text{difference}}(6, N = 305) 29.45, p < .05$, resulting in the conclusion that the partially mediated model is the superior model of the two. As it is plausible that no mediation exists in the structural model and that the justice facets are directly linked to both their respective commitment facets and to positive affective well-being, the partially mediated structural model was also compared to an unmediated model (see Figure 7),

which proved to be an adequate fit to the data. The chi-square difference test between the partial mediation model and the unmediated model was significant: $\chi^2_{\text{difference}}(3, N = 305) = 49.60, p < .05$, resulting in the conclusion that the partial mediation model (which contains 3 additional paths beyond the unmediated model) is the superior model of the two.

As a post hoc examination of the results, I trimmed the partial mediation model (see Figure 8) of all non-significant paths, and re-ran the structural model. I compared the partial mediation model to the post-hoc trimmed model using a chi-square difference test, $\chi^2_{\text{difference}}(7, N = 305) = 6.57, p > .05$, resulting in the conclusion that there is no difference between the partially mediated model and the trimmed partially mediated model (See Table 6). As such, I interpreted the trimmed partial mediation model.

In this final model, distributive justice ($\beta = 0.19, p < .05$) and procedural justice ($\beta = 0.28, p < .001$) significantly predicted organizational commitment. Supervisor informational justice significantly predicted supervisor commitment ($\beta = 0.71, p < .001$). Coworker informational justice ($\beta = 0.43, p < .001$) significantly predicted coworker commitment; there was also a marginally significant link between coworker interpersonal justice and coworker commitment ($\beta = 0.15, p < .10$).

With respect to the prediction of well-being, distributive justice ($\beta = 0.12, p < .05$), supervisor informational justice ($\beta = 0.31, p < .001$), and organizational commitment ($\beta = 0.43, p < .001$) significantly predicted positive affective well-being. Overall, the trimmed partially mediated structural model accounted for a large proportion of variance in the following endogenous variables: 16.6% for organizational affective

commitment, 50.6% for supervisor affective commitment, 30.1% for coworker affective commitment; and 40.2% for positive affective well-being.

Discussion

Research has explored both multi-foci justice and multi-foci commitment in isolation from one another, with little research integration. Lavelle et al. (2007) recently proposed a target similarity model to address this lack of integration. I used Lavelle et al.'s (2007) framework to examine the links between employee perceptions of justice (distributive, procedural, supervisor interpersonal, supervisor informational, coworker interpersonal and coworker informational) and affective commitment (organizational, supervisor, and coworker). In addition, in light of calls to examine positive psychological constructs in organizational research (Seligman & Csikszentmihalyi, 2000), I integrated positive affective well-being into the proposed model. I tested seven hypotheses highlighted in the model depicted in Figure 1. I found full support for four of my hypotheses but only partial support for the three remaining hypotheses.

In line with Hypothesis 1, confirmatory factor analysis results suggest that justice judgements comprise six facets: distributive, procedural, informational supervisor, interpersonal supervisor, informational coworker, and interpersonal coworker. This finding expands upon Colquitt's (2001) hypothesized four-factor model of justice by demonstrating that informational and interpersonal justice can be parsed further into supervisor and coworker subfacets. The establishment of coworker informational justice as a distinct construct is a unique contribution to the justice literature.

Similar to the first hypothesis, confirmatory factor analysis results confirmed that affective commitment comprised three facets: organization, supervisor, and coworker,

providing support for Hypothesis 2. Previous research (e.g. Becker, 1992; Riketta & Van Dick, 2005; Stinglhamber et al., 2002) has also confirmed the value of distinguishing between commitment entities (e.g., organization, occupation, supervisor, workgroup, and customer), because they differentially predict important outcome variables. The current research suggests that employees distinguish between, and can form affective attachments to, their coworkers as well as their supervisors and organizations.

As outlined previously, different foci of justice have been found to predict different foci of outcome variables (Lavelle et al., 2007; Masterson et al., 2000). In accordance with this research, Hypothesis 3 stipulated that distributive and procedural justice would predict employees' affective attachment to the organization in the form of organizational commitment. The data supported this prediction. In line with previous research (e.g., Colquitt, 2001; Lambert, Hogan, & Griffin, 2007), employees' judgements with respect to the fair allocation of rewards in the workplace (distributive justice) and the manner in which rewards are allocated through policies and procedures (procedural justice) predicted their level of affective organizational commitment.

Hypothesis 4 specified that interpersonal and informational justice from supervisors would predict employees' affective attachment to their supervisors (supervisor commitment). This hypothesis was only partially supported. Specifically, the path from supervisor informational justice to supervisor affective commitment was significant; however, the path from supervisor interpersonal justice to supervisor affective commitment was not. This finding suggests that employee judgements pertaining to their supervisor's provision of work-related information and explanations have a strong link to their affective attachment toward their supervisors. Once such

judgements are taken into account, however, fair interpersonal treatment by supervisors (i.e., being treated with dignity and respect) did not predict unique variance in employees' commitment. It is possible that supervisors who provide information and explanations regarding decisions and procedures convey a level of dignity and respect in doing so. In this regard, there might be little variance left for interpersonal justice to explain after informational justice perceptions are taken into account. This is especially likely given the high zero-order correlation found between supervisor interpersonal justice and supervisor informational justice in the current study. Furthermore, the variance for the supervisor interpersonal justice variable was relatively low, which may also have contributed to the lack of significant results found.

Hypothesis 5 predicted that justice from coworkers in the form of informational and interpersonal justice would predict employees' affective attachments to their coworkers (affective coworker commitment). Supporting this hypothesis, both facets of justice predicted coworker affective commitment, albeit the link from coworker interpersonal justice was only marginally significant. Thus, it appears that both respectful treatment from coworkers, as well as the provision of information and explanations for work related matters, builds affective commitment to coworkers. Similar to the findings for supervisor commitment, however, the quality of communication shared between coworkers may be particularly important in the formation of affective feelings toward coworkers. The fact that interpersonal justice again appeared to account for relatively less variance in coworker commitment may be due to similar reasons as those noted above for supervisor commitment.

To my knowledge, coworker informational justice has not been studied previously; my findings suggest that future justice research should incorporate such judgments to understand fully the links between fairness perceptions and important outcomes. More specific to the current study, the prediction of coworker commitment by coworker informational and interpersonal justice is a novel contribution that advances our understanding of the development of positive coworker relationships in organizations.

The aforementioned results support the notion that justice perceptions play a key role in the formation of affective commitment toward the organization, supervisors and coworkers. These results provide partial support for the target-similarity model (Lavelle et al., 2007), in that employees form justice judgements based on their perceptions of treatment from various foci (organization, supervisor, and coworker), and then develop attitudes (affective commitment) toward the source they hold accountable. Indeed, all of the justice facets predicted affective commitment toward their respective sources, except for supervisor interpersonal justice (and, to some extent, coworker interpersonal justice).

Hypothesis 6, which stipulated that the three proposed affective commitment foci: organization, supervisor, and coworkers, would predict positive affective well-being, was only partially supported. Specifically, of the three, organizational affective commitment was the only significant predictor of positive affective well-being. This finding suggests that when employees feel an emotional attachment to, and identification with, their organization, they experience greater general well-being, for example, in the form of enthusiasm, motivation, and cheerfulness. There is a paucity of research linking affective commitment to affective well-being. For the most part, affective commitment and general well-being have been measured together as outcome variables (Grawitch et al., 2007;

LeBlanc & Kelloway, 2002); this is the first research study that I am aware of that examined multi-foci affective commitment as a predictor of well-being in an integrated model. The notion that work-related emotional attachment and identification with one's organization is associated with general mental well-being is an important finding as it underscores that employee work attitudes have broader implications for individuals' psychological health.

It was certainly surprising that supervisor and coworker commitment did not predict unique variance in positive affective well-being. That is, employees' emotional attachments toward their supervisors and coworkers did not predict unique variance in positive affective well-being once organizational commitment was taken into account. Multicollinearity may partially explain this finding as the zero-order correlations between supervisor and coworker commitment, and positive affective well-being, were in fact significant. Indeed, it is possible that commitment toward supervisors and coworkers may, to some extent, be captured within the broader organizational commitment construct.

Lastly, Hypothesis 7 proposed that multi-foci commitment variables would mediate the relationships between multi-foci justice variables and positive affective well-being. This hypothesis was only partially supported. Organizational commitment fully mediated the relationship between procedural justice and positive affective well-being and partially mediated the relationship between distributive justice and well-being. Thus, these findings suggest that the fair allocation of rewards, and the use of accurate and appropriate procedures to allocate outcomes, builds affective attachment to the organization, which, in turn, is associated with greater positive affective well-being. As

alluded to above, no mediation, however, was found through supervisor or coworker commitment.

The direct (unmediated) links found between distributive justice and supervisor informational justice, and positive affective well-being, were somewhat unexpected, however, these links are in line with previous research that has shown that employee perceptions of justice influence employee health and well-being (e.g., Elovainio et al., 2001; Francis & Barling, 2005; Pisarski et al., 2008). Specifically, in the current study, in addition to its mediated link through commitment, distributive justice had a direct link to positive affective well-being. Thus, regardless of an employee's attachment to the organization, greater affective well-being was reported when employees perceive that their level of outcomes (e.g., pay, benefits) is appropriate. One reason for this direct link may be that when an employee perceives that their level of pay (and other outcomes, including promotions and benefits) is appropriate for the work that they do, they may experience greater self-esteem (Scott, Shaw, & Duffy, 2008) which might contribute to more positive affective well-being (Peterson, 2000). In addition, given that pay is exchanged for items that can improve one's quality of life, it makes sense that pay may ultimately contribute to one's well-being, regardless of an employee's level of commitment.

Supervisor informational justice also predicted well-being. An explanation for this direct link might be that information reduces uncertainty, which may alleviate stress, especially for people with self-uncertainty issues (De Cremer & Sedikides, 2005). For example, Pollard (2001) investigated uncertainty during a large-scale reorganization and found that increased levels of uncertainty in the workplace lead to increases in distress

and systolic blood pressure. Furthermore, being made aware of important matters in a timely fashion would facilitate planning, which might also relieve stress and contribute to general mental well-being (De Cremer & Sedikides, 2005). Similarly, in line with instrumental models of fairness (Thibaut & Walker, 1975), explanations and information regarding outcome allocation decisions and procedures may be used by employees to facilitate performance improvements and enhance the possibility of future positive outcomes. Hope for future rewards may also contribute to greater well-being (Pollard, 2001). Overall then, a direct link from supervisor informational justice to well-being seems logical. Indeed, an employee need not be committed to a supervisor to take advantage of information that is helpful, and that relieves stress.

Possible Practical Implications

There may be several practical implications for the Canadian Forces (and other organizations) from this study. For example, the fair allocation of resources and the use of fair procedures should contribute indirectly to well-being and directly to feelings of affective organizational commitment. Indeed, when paid appropriately for work performed, and when promoted according to ability level (distributive justice), employees may have higher levels of affective attachment to the organization and report greater general well-being. In line with previous research (Meyer et al., 1993) greater affective commitment (Kammeyer-Mueller et al., 2005) and well-being (Yang, Che, & Spector, 2008) may reduce employees' likelihood of leaving the organization. Given concerns surrounding retention (see recruiting and retention in the Canadian Forces, 2009), fostering affective commitment and well-being through fairness might help to reduce turnover intentions.

Feelings of affective attachment toward supervisors are formed when employees feel they receive information in a timely manner and when they are given adequate explanations and work-related information. Indeed, the provision of information and explanations from supervisors appears to contribute directly to both supervisor commitment and to employee well-being. Therefore, fostering high quality communication between supervisors and their subordinates through training and/or mentoring programs might improve both of these outcomes.

Feelings of affective attachment toward coworkers are similarly formed when employees are provided with helpful work-related information. Though marginally significant, there is some evidence that receiving polite and respectful treatment from coworkers also uniquely contributes to commitment. These findings speak to the importance of ensuring teams or units of employees are well suited to work with one another. Indeed, leaders at all levels would do well to ensure that their work teams are made up of personnel with good communication skills to promote coworker commitment. Providing training for employees in social relations and communication might further develop skills that enhance employee interpersonal interaction and thereby, increase levels of commitment. Given that organizational commitment predicts turnover intentions (Kammeyer-Mueller et al., 2005), it is plausible that coworker commitment might also provide incremental variance in the prediction of turnover intentions, in addition to other outcomes. This seems likely as the quality of social relationships in the workplace have been associated with turnover intentions (Wasti, 2003; Wolfgang, 1995).

Limitations

Because of the correlational research design used, this research cannot establish causal relationships among the research variables. However, the findings of this study are relatively consistent with existing theory and research (Lavelle et al., 2007; Masterson et al., 2000; Moorman et al., 1998; Rupp & Cropanzano, 2002). Nevertheless, longitudinal or experimental research should be undertaken to provide better evidence of the causal nature of the research model.

Another limitation of the study pertains to the sample used, and therefore, the generalizability of the research findings. The sample surveyed, however, may be similar in composition to other organizations, and might have broad implications for organizations of similar structure. For example, the sample was drawn from a larger unit within the Canadian Forces. Other units within the Canadian Forces would likely have a similar structure and employees of similar demographic description. Therefore, these results might generalize to other units within the Canadian Forces. Moreover, the research drawn on to develop the hypotheses for this research used non-military samples (e.g. Colquitt et al., 2001; Folger & Konovsky, 1989; Kacmar et al., 1999; Lambert et al., 2007); thus, I am hopeful that the results from this study would generalize beyond a military setting. Nevertheless, replication of the study using different types of organizations would add further to the external validity of these research findings.

As the data were collected from a single source through means of an electronic survey, there remains a risk that common-method variance may have influenced the strength of the observed relationships between the variables in the study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). As different magnitudes of correlations among the

research variables were found, there is minimal risk that the relationships found are due to common method variance (Evans, 1985). Nonetheless, replication of these findings using multiple sources and methods would support the validity of my conclusions further.

Another potential limitation of the study pertains to the fact that the justice measures were situated in advance of the outcome measures of commitment and positive affective well-being (PAWS; Hess et al., 2008) in the survey. The order of the variables in the survey can be suggestive of causal relationships (Podsakoff et al., 2003); when causal relationships are suggested inadvertently to the respondent, priming or order effects can occur (Podsakoff et al., 2003). Therefore, it is possible that respondents may have logically deduced our predicted relationships by virtue of the order of the scales in the survey (Podsakoff et al., 2003). However, given that the measures for the study were embedded within a larger survey, it is doubtful that respondents would have been able to distinguish which scales were included in the research study. Moreover, some of our predicted relationships were not supported by the data, possibly suggesting a minimal or non-existent priming effect. Regardless, future research should ensure that scales are counterbalanced to better identify and address possible order or priming effects.

Future Research

The hypothesized multi-foci integrated model of justice and commitment expands on the research literature and highlights questions for future investigation. The weaker (or non-significant in the case of supervisors) paths between interpersonal justice and affective commitment suggest that interpersonal justice may potentially play a smaller role in the formation of affective attachments to entities than does informational justice. As alluded to earlier, however, examination of the zero-order correlations between

interpersonal and informational justice suggest that multicollinearity may have played a role in the relationships found. It is likely that supervisors and coworkers who pass on information in a timely manner and who communicate well will be perceived as fair in their interpersonal interactions with others; thus, the two variables may share some common variance that becomes difficult to parse out and interpret. A longitudinal study would provide further insight into the impact of justice events on justice judgements over time and to what degree incremental variance exists consistently for the six facets of justice in the prediction of important organizational outcome variables. Similarly, experimental research designs that attempt to orthogonally manipulate interpersonal and informational justice may allow greater insight into their relative contributions to employee attitudes and behaviours. The current research could also be replicated with different multi-foci mediators (e.g. trust in the organization, supervisors and coworkers; Lavelle et al., 2007) and outcomes (e.g. psychological hardiness; Bartone, Roland, Picano, & Williams, 2008) to examine further the nature of the relationship between multi-foci justice and other outcome variables.

Moreover, this research was conducted with a positive psychological focus (Seligman & Csikszentmihalyi, 2000) that examined positive affective well-being as an important outcome variable. Considerable research has demonstrated that healthy employees (higher levels of positive affect and psychological well-being) are generally happier and more productive at work. For example, positive affect in the workplace is associated with lower levels of stressors and physical symptoms, and higher levels of job satisfaction (Van Katwyk et al., 2000). Positive affect is also associated with greater organizational citizenship behaviours (Williams & Shiaw, 1999), better job performance

(Wright & Cropanzano, 2000), improved creative problem solving (Isen, Daubman, & Nowicki, 1987), and better health and longevity (Lyubomirsky, King, & Diener, 2005). In fact, one longitudinal study (Staw, Sutton, & Pelled, 1994) found that higher levels of positive affect measured at time one were indicative of better supervisor evaluations, greater pay, and better supervisor and coworker support at time two (18-20 months later).

The important outcomes associated with positive affective well-being underscore the value for organizations in measuring positive psychological constructs and for continued empirical investigations in this area. Indeed, low levels of positive affective well-being in the workplace might serve as an indicator of impending problems in the workplace, such as cynicism (Cole, Bruch, & Vogel, 2006). Moreover, identifying low levels of positive constructs might be more proactive than identifying high levels of negative constructs, since organizations might have more time to address potential problems. For example, Peterson, Park, and Sweeney (2008) suggest that group program interventions may only be successful when aspects of morale (morale encompasses optimism which is somewhat similar to positive affect) are high. Moreover, one can speculate that employees in an organization who have reached a point where negative affect is pervasive might have made plans to leave the organization, or might already be engaging in counterproductive workplace behaviours (Hershcovis et al., 2007). Thus, it might seem in an organization's best interests to identify indicators that signal lower levels of positive affect in order to initiate necessary change before the impact of negative affect (e.g., counterproductive workplace behaviours) takes effect.

In light of the above discussion, future research should continue to examine constructs with a positive psychological focus to provide balance to the research literature

that is heavily weighted with a negative psychological perspective (Seligman & Csikszentmihalyi, 2000). With respect to the military in particular, it would be interesting to examine some less well established psychological constructs, such as resiliency (Ablett & Jones, 2007) or psychological hardiness (Bartone et al., 2008), as outcome measures in the justice/commitment multi-foci model. For example, justice might lead to improved psychological hardiness, as justice contributes to commitment (Colquitt, 2001; Lambert et al., 2007), and commitment has been associated with resiliency in palliative care nursing staff (Ablett & Jones, 2007). In stressful situations, informational supervisor justice, in particular, might have a particularly strong impact on psychological hardiness, given the effect that information has on stress reduction (Cole et al., 2006). For instance, Cole et al. (2006) found that information and support provided by supervisors in times of uncertainty lead to positive emotions and these positive emotions were associated with greater levels of psychological hardiness. Given these findings, it is possible that supervisor informational justice might lead to positive affect which might lessen the effects of uncertainty on stress levels for employees during operations (Cole et al., 2006). In a related vein, in terms of the military readiness state of personnel, research could also investigate whether positive affective well-being might be a valuable indicator of the degree to which members are ready to deploy on operations.

Conclusion

This research examined positive affective-well-being within a multi-foci target-similarity model put forward by Lavelle et al. (2007). Results partially supported a multi-foci model in that justice judgments of a particular source generally predicted employees' affective attachments toward that source. Moreover, in addition to direct links between

various justice facets and well-being, organizational commitment was found to mediate the relationships between the fairness of decision making procedures and outcomes, and general mental health. Thus, emotional attachments in the workplace, as well as perceived fairness, appear to have broader implications for people's positive well-being in their daily lives.

References

- Ablett, J.R., & Jones, R.S.P. (2007). Resilience and well-being in palliative care staff: A qualitative study of hospice nurses' experience of work. *Psyco-Oncology*, 16, 733-740.
- Adams, J.S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 267=299). New York: Academic Press.
- Alexander, S., & Ruderman, M. (1987). The role of procedural and distributive justice in Organizational Behavior. *Social Justice Research*, 1(2), 177-198.
- Allen, N.J., & Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1-18.
- Allen, N.J., & Meyer, J.P. (1996). Affective, continuance, and normative commitment to the organization: An examination of construct validity. *Journal of Vocational Behavior*, 49, 252-276.
- Anderson, J.C., & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Bandalos, D.L. (2002). The effects of item parceling on goodness-of-fit and parameter estimate bias in structural equation modeling. *Structural Equation Modeling*, 9(1), 78-102.
- Bartone, P.T., Roland, R.R., Picano, J.J., & Williams, T.J. (2008). Psychological hardiness

- predicts success in US army special forces candidates. *International Journal of Selection and Assessment*, 16(1), 78-81.
- Becker, T.E. (1992). Foci and bases of commitment: Are they distinctions worth making? *Academy of Management Journal*, 35(1), 232-244.
- Bentler, P.M., & Bonett, D.G. (1980). Significant tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588-606.
- Bies, R.J., & Moag, J.F. (1986). Interactional justice: Communication criteria of fairness. In R.J. Lewicki, B.H. Sheppard, & M.H. Bazerman (Eds.), *Research on negotiations in organizations* (Vol 1, pp. 43-55). Greenwich, CT: JAI Press.
- Bies, R.J., & Shapiro, D.L. (1987). Interactional fairness judgments: The influence of causal accounts. *Social Justice Research*, 1, 199-218.
- Blau, P.M. (1964). *Exchange and power in social life*. New York: Wiley.
- Branscombe, N.R., Spears, R., Ellemers, N., & Doosje, B. (2002). Intragroup and intergroup evaluation effects on group behaviour. *Personality and Social Psychology Bulletin*, 28(6), 744-753
- Brown, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fit. K.A. Bollen & J.S. Long (Eds.), *Testing Structural Equation Models*. Newbury Park, CA: Sage.
- Byrne, B. (1994). *Structural Equation Modeling with EQS and EQS/Windows: Basic Concepts, Applications and Programming*. Thousand Oaks, CA: Sage.
- Choi, J. (2008). Event justice perceptions and employees' reactions: Perceptions of social entity justice as a moderator. *Journal of Applied Psychology*, 93(3), 513-528.
- Cohen, A. (1996). On the discriminant validity of the Meyer and Allen measure of

organizational commitment: How does it fit with the work commitment construct?

Educational and Psychological Measurement, 56(3), 494-503.

Cohen-Charash, Y., & Spector, P.E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behaviour and Human Decision Processes*, 86(2), 278-321.

Cole, M.S., Bruch, H., & Vogel, B. (2006). Emotion as mediators of the relations between perceived supervisor support and psychological hardiness on employee cynicism. *Journal of Organizational Behaviour*, 27, 463-484.

Colquitt, J.A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86(3), 386-400.

Colquitt, J.A., Conlon, D.E., Wesson, M.J., Porter, C.O.L.H., & Ng, K.Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86(3), 425-445.

Cropanzano, R., Byrne, Z.S., Bobocel, D.R., & Rupp, D.E. (2001). Moral virtues, fairness heuristics, social entities, and other denizens of organizational justice. *Journal of Vocational Behavior*, 58, 164-209.

Cropanzano, R., Li, A., & James, K. (2007). Intraunit justice and interunit justice and the people that experience them. In F.Dansereau & F.J. Yammarino (Eds.), *Research in multi-level issues*, (Vol. 6): 415-437. Oxford, UK: Elsevier.

De Cremer, D., & Sedikides, C. (2005). Self-uncertainty and responsiveness to procedural justice. *Journal of Experimental Social Psychology*, 41, 157-173.

De Dreu, C.K.W. (2007). Cooperative outcome interdependence, task reflexivity, and

- team effectiveness: A motivated information processing perspective. *Journal of Applied Psychology*, 92(3), 628-638.
- Den Hartog, D.N., & Belschak, F.D. (2007). Personal initiative, commitment and affect at work. *Journal of Occupational and Organizational Psychology*, 80, 601-611.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55, 34-43.
- Donovan, M.A., Drasgow, F., & Munson, L.J. (1998). The perceptions of fair interpersonal treatment scale: Development and validation of interpersonal treatment in the workplace. *Journal of Applied Psychology*, 83(5), 683-692.
- Dunham, R.B., Grube, J.A., & Castañeda, M.B. (1994). Organizational commitment: The utility of an integrative definition. *Journal of Applied Psychology*, 79(3), 370-380.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational Support. *Journal of Applied Psychology*, 71(3), 500-507.
- Elovainio, M., Kivimäki, M., & Helkama, K. (2001). Organizational justice evaluations, job control, and occupational strain. *Journal of Applied Psychology*, 86(3), 418-424.
- Evans, M. G. (1985). A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. *Organizational Behavior and Human Decision Processes* 36(3), 305-323.
- Folger, R., & Konovsky, M.A. (1989). Effects of procedural and distributive justice on reactions to pay raise decisions. *The Academy of Management Journal*, 32(1), 115-130.
- Francis, L., & Barling, J. (2005). Organizational injustice and psychological strain.

Canadian Journal of Behavioural Science, 37(4), 250-261.

- Fredrickson, B.L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218-226.
- Graen, G.B., & Scandura, T.A. (1987). Toward a psychology of dyadic organizing. In L.L. Cummings & B. Staw (Eds.). *Research in organizational behaviour*, vol. 9: 175-208. Greenwich, T: JAI Press.
- Grawitch, M.J., Trares, S., & Kohler, J.M. (2007). Healthy workplace practices and employee outcomes. *International Journal of Stress Management*, 14(3), 275-293.
- Greenberg, J. (1993). Stealing in the name of justice: Informational and interpersonal moderators of theft reactions to underpayment inequity. *Organizational Behavior and Human Decision Processes*, 54, 81-103.
- Herrbach, O. (2006). A matter of feeling? The affective tone of organizational commitment and identification. *Journal of Organizational Behavior*, 27, 629-643.
- Hershcovis, M.S., Turner, N., Barling, J., Arnold, K.A., Dupré, K.E., Inness, M., LeBlanc, M.M., & Sivanathan, N. (2007). Research Reports: Predicting workplace aggression: A meta-analysis. *Journal of Applied Psychology*, 92(1), 228-238.
- Hess, A., Kelloway, E.K., Francis, L., Catano, V.M., & Fleming, M. (2008). *Development of the Positive Affective Well-Being Scale*. Unpublished manuscript.
- Holmvall, C.M., & Sidhu, J. (2007). Predicting customer service employees' job satisfaction and turnover intentions: The roles of customer interactional injustice and interdependent self-construal. *Social Justice Research*, 20, 479-496.

- Hoyle, R.H. (1995). *Structural Equation Modeling: Concepts, Issues, and Applications*. Thousand Oaks, California: Sage Publications.
- Irving, P.G., Coleman, D.F., & Cooper, C.L. (1997). Further assessments of a three-component model of occupational commitment: Generalizability and differences across occupations. *Journal of Applied Psychology*, 82(3), 444-452.
- Isen, A.M., Daubman, K.A., & Nowicki, G.P. (1987). Positive affect facilitates creative problem solving. *Personality and Social Psychology*, 52(6), 1122-1131.
- Jones, F., O'Connor, D.B., Conner, M., McMillan, B., & Ferguson, E. (2007). Impact of daily mood, work hours, and iso-strain variables on self-reported health behaviors. *Journal of Applied Psychology*, 92(6), 1731-1740.
- Kacmar, K.M., Carlson, D.S., & Brymer, R.A. (1999). Antecedents and consequences of organizational commitment: A comparison of two scales. *Educational and Psychological Measurement*, 59(6), 976-994.
- Kammeyer-Mueller, J.D., Wanberg, C.R., Glomb, T.M., & Ahlburg, D. (2005). The role of temporal shifts in turnover processes: It's about time. *Journal of Applied Psychology*, 90(4), 644-658.
- Kelloway, E.K. (1998). *Using LISREL for structural equation modeling: A researcher's guide*. Thousand Oaks: Sage Publications.
- Kline, R.B. (2005). *Principles and Practice of Structural Equation Modeling*, 2nd Ed. New York: The Guilford Press.
- Kopp, M.S., Stauder, A., Purebl, G., Janszky, I., & Skrabski, A. (2007). Work stress and mental health in a changing society. *European Journal of Public Health*, 1-7.
- Lambert, E.G., Hogan, N.L., & Griffin, M.L. (2007). The impact of distributive and

- procedural justice on correctional staff job stress, job satisfaction, and organizational commitment. *Journal of Criminal Justice*, 35, 644-656.
- Lavelle, J.J., Rupp, D.E., & Brockner, J. (2007). Taking a multifoci approach to the study of justice, social exchange, and citizenship behaviour: The target similarity model. *Journal of Management*, 33(6), 841-866.
- LeBlanc, M.M., & Kelloway, E.K. (2002). Predictors and outcomes of workplace violence and aggression. *Journal of Applied Psychology*, 87(3), 444-453.
- Lee, K., Allen, N.J., Meyer, J.P. & Rhee, K.Y. (2001). The three-component model of organizational commitment: An application to South Korea. *Applied Psychology: An International Review*, 50(4), 596-614.
- Leventhal, G.S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg, & R. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 27-55). New York: Plenum Press.
- Liao, H., & Rupp, D.E. (2005). The impact of justice climate and justice orientation on work outcomes: A cross-level multifoci framework. *Journal of Applied Psychology*, 90(2), 242-256.
- Lim, S., Cortina, L.M., & Magley, V.J. (2008). Personal and workgroup incivility: Impact on work and health outcomes. *Journal of Applied Psychology*, 93(1), 95-107.
- Lind, E., & Tyler, T. (1988). *The social psychology of procedural justice*. New York, NY US: Plenum Press.

- Little, T.D., Cunningham, W.A., Shahar, G., & Widaman, K.F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9(2), 151-173.
- Louis, M.R., Posner, B.Z., & Powell, G.N. (1983). The availability and helpfulness of socialization practices. *Personnel Psychology*, 36(4), 857-866.
- Luchak, A.A., & Gellatly, I.R. (2007). A comparison of linear and nonlinear relations between organizational commitment and work outcomes. *Journal of Applied Psychology*, 92(3), 786-793.
- Lykken, D., & Tellegen, A. (1996). Happiness is a stochastic phenomenon: Research report. *Psychological Science*, 7(3), 186-189.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131(6), 803-855.
- 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 on work relationships. *Academy of Management Journal*, 43(4), 738-748.
- Mathieu, J.E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment, *Psychological Bulletin*, 108(2), 171-194.
- Meade, A.W., Johnson, E.C., & Braddy, P.W. (2008). Power and sensitivity of alternative fit indices in tests of measurement invariance. *Journal of Applied Psychology*, 93(3), 568-592.
- Meyer, J.P., Allen, N.J., & Smith, C.A. (1993). Commitment to organizations and

- occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78(4), 538-551.
- Meyer, J.P., Stanley, D.J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, 61, 20-52.
- Moorman, R.H., Blakely, G.L., & Niehoff, B.P. (1998). Does perceived organizational support mediate the relationship between procedural justice and organizational citizenship behaviour? *Academy of Management Journal*, 41(3), 351-357.
- Ostroff, C., & Kozlowski, S.W. (1992). Organizational socialization as a learning process: The role of information acquisition. *Personnel Psychology*, 45(4), 849-874.
- Peterson, C. (2000). The future of optimism. *American Psychologist*, 55(3), 44-55.
- Peterson, C., Park, N., & Sweeney, P.J. (2008). Group well-being: Morale from a positive psychology perspective. *Applied Psychology*, 57, 19-36.
- Pisarski, A., Lawrence, S.A., Bohle, P., & Brook, C. (2008). Organizational influences on the work life conflict and health of shiftworkers. *Applied Ergonomics*, 39, 580-588.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Pollard, T.M. (2001). Changes in mental well-being, blood pressure and total cholesterol

levels during workplace reorganization: The impact of uncertainty. *Work & Stress*, 15(1), 14-28.

Porter, C.O.L.H., Conlon, D.E., & Barber, A.E. (2004). The dynamics of salary negotiations: Effects on applicants' justice perceptions and recruitment decisions. *The International Journal of Conflict Management*, 15(3), 273-303.

Recruiting and retention in the Canadian Forces (May 5, 2009). *National Defence and the Canadian Forces Backgrounder*. Retrieved June 30, 2009, from <http://www.forces.gc.ca/site/news-nouvelles/view-news-afficher-nouvelles-eng.asp?id=2865>

Riketta, M., & Van Dick, R. (2005). Foci of attachment in organizations: A meta-analytic comparison of the strength and correlates of workgroup versus organizational identification and commitment. *Journal of Vocational Behavior*, 67, 490-510.

Riley, M.A. (2002). *Measuring the Human Dimensions of Unit Effectiveness-The Unit Morale Profile*. Conference Paper 2002-01. Director Human Resources Research and Evaluation, National Defence headquarters, Ottawa, Ontario, Canada.

Riolli, L., & Savicki, V. (2006). Impact of fairness, leadership, and coping on strain, burnout, and turnover in organizational change. *International Journal of Stress Management*, 13(3), 351-377.

Rupp, D.E., & Cropanzano, R. (2002). The mediating effects of social exchange relationships in predicting workplace outcomes from multifoci organizational justice. *Organizational Behavior and Human Decision Processes*, 89, 925-946.

Rupp, D.E., McCance, A.S., Spencer, S., & Sonntag, K. (2008). Customer (in)justice and

emotional labor: The role of perspective taking, anger, and emotional regulation. *Journal of Management*, 34(5), 903-924.

Rupp, D.E., & Spencer, S. (2006). When customers lash out: The effects of customer interactional injustice on emotional labor and the mediating role of discrete emotions. *Journal of Applied Psychology*, 91(4), 971-978.

Salovey, P., Rothman, A.J., Detweiler, J.B., & Steward, W.T. (2000). Emotional states and physical health. *American Psychologist*, 55(1), 110-121.

Scott, K.L., Shaw, J.D., & Duffy, M.K. (2008). Merit pay raises and organization-based self-esteem. *Journal of Organizational Behavior*, 29, 967-980.

Seligman, M.E.P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14.

Sonnentag, S., & Frese, M. (2003). Stress in organizations. In W.C. Borman, D.R. Ilgen, and R.J. Klimoski (Eds.) *Handbook of Psychology*, vol. 12: *Industrial Organizational Psychology* (pp. 453-491). New Jersey: John Wiley & Sons.

Staw, B.M., Sutton, R.I., & Pelled, L.H., (1994). Employee positive emotion and favorable outcomes at the workplace. *Organization Science*, 5(1), 51-71.

Stinglhamber, F., Bentein, K., & Vandenberghe, C. (2002). Extension of the three-component model of commitment to five foci: Development of measures and substantive test. *European Journal of Psychological Assessment*, 18(2), 123-138.

Tabachnick, B.G., & Fidell, L.S. (2007). *Using multivariate statistics* (5th Ed.). Boston, MA: Pearson Education Inc.

Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale: Laurence Erlbaum Associates.

- Van Katwyk, P.T., Fox, S. Spector, P.E., & Kelloway, E.K. (2000). Using the job-related affective well-being scale (JAWS) to investigate affective responses to work stressors. *Journal of Occupational Health Psychology, 5*(2), 219-230
- Vandenberghe, C., Bentein, K., & Stinglhamber, F. (2004). Affective commitment to the organization, supervisor, and workgroup: Antecedents and outcomes. *Journal of Vocational Behavior, 64*, 47-71.
- Vandenberghe, C., Bentein, K., Michon, R., Chebat, J.C., Tremblay, M., & Fils, J.F. (2007). Examination of the role of perceived support and employee commitment in employee-customer encounters. *Journal of Applied Psychology, 92*(4), 1177-1187.
- Wasti, S.A. (2003). Organizational commitment, turnover intentions and the influence of cultural values. *Journal of Occupational Psychology, 76*, 303-321.
- Wayne, S.J., Shore, L.M., Bommer, W.H., & Tetrick, L.E. (2002). The role of fair treatment and rewards in perceptions of organizational support and leader-member exchange. *Journal of Applied Psychology, 87*(3), 590-598.
- Williams, S., & Shiaw, W.T. (1999). Mood and organizational citizenship behaviour: The effects of positive affect on employee organizational citizenship behavior intentions. *The Journal of Psychology, 133*(6), 656-668.
- Wolfgang, A.P. (1995). Job stress, coworker social support, and career commitment: A comparison of female and male pharmacists. *Journal of Social Behavior and Personality, 10*(4), 149-160.
- Wright, T.A., & Cropanzano, R. (2000). Psychological well-being and job satisfaction as

predictors of job performance. *Journal of Occupational Health Psychology*, 5(1), 84-94.

Yang, L.Q., Che, H., & Spector, P.E. (2008). Job stress and well-being: An examination from the view of person-environment fit. *Journal of Occupational and Organizational Psychology*, 81, 567-587.

Zellars, K.L., Perrewé, P.L., Hochwarter, W.A., & Anderson, K.S. (2006). The interactive effects of positive affect and conscientiousness on strain. *Journal of Occupational Health Psychology*, 11(3), 281-289.

Appendix A

Information Cover Letter

Unit Morale Profile

AIM:

The purpose of this survey is to provide your Commanding Officer (CO) with information pertaining to morale and leadership in your unit. Your responses will allow your CO to recognize strengths and identify areas that require attention. This is your opportunity to speak out and be heard.

Participation is voluntary – You do not have to complete this survey. However, in order to provide your CO with an accurate picture of the state of morale and leadership in your unit, maximum participation is crucial. Should you decide to participate, you are encouraged to complete all sections of this survey fully and honestly. If there are particular items you do not feel comfortable answering, you may choose to leave those blank.

CONFIDENTIALITY:

Under the Access to Information Act, Canadian citizens are entitled to obtain copies of reports and data held in federal government files – This includes information from this survey. Similarly, under the Privacy Act, Canadian citizens are entitled to copies of all information concerning them that is held in federal government files. However, prior to releasing the requested information, the Director of Access to Information and Privacy (DAIP) screens the data to ensure that individual identities are not disclosed. The results from this survey administration will only be released in combined form to ensure that the anonymity of all participants is protected. In other words, your individual responses will not be provided to your CO, and you will not be identified in any way.

RESEARCH:

Please note that some of the scales contained in the UMP may also be used for research purposes. Published research reports will only present responses at the group level; no individual participants or units will be identified.

Thank you for your participation!

Director Military Personnel Operational Research and Analysis authorizes the administration of this survey within DND/CF in accordance with CANFORGEN 198/08 CMP 084/08 271214Z OCT 08.

Appendix B

Organizational Justice Items Adapted from Colquitt (2001)

Distributive Justice Items:

5-point Likert-type scale: 1 (to a very small extent); 2 (to a small extent); 3 (to a moderate extent); 4 (to a large extent); to 5 (to a very large extent)

The following items refer to the outcomes (e.g., pay, promotions) you receive at work. To what extent:

1. Do your outcomes reflect the effort you have put into your work?
2. Are your outcomes appropriate for the work you have completed?
3. Do your outcomes reflect what you have contributed?
4. Are your outcomes justified given your performance?

Procedural Justice Items:

5-point Likert-type scale: 1 (to a very small extent); 2 (to a small extent); 3 (to a moderate extent); 4 (to a large extent); to 5 (to a very large extent)

The following items refer to the procedures used to arrive at your outcomes (e.g., pay, promotions). To what extent:

1. Are you able to express your views and feelings during decision-making procedures?
2. Do you have influence over the outcomes arrived at by decision-making procedures?
3. Are decision-making procedures applied consistently?
4. Are decision-making procedures free of bias?
5. Are decision-making procedures based on accurate information?

6. Are you able to appeal the outcomes arrived at by decision-making procedures?
7. Do decision-making procedures uphold ethical and moral standards?

Interpersonal Supervisor Justice Items:

5-point Likert-type scale: 1 (to a very small extent); 2 (to a small extent); 3 (to a moderate extent); 4 (to a large extent); to 5 (to a very large extent)

The following items refer to your supervisor. To what extent:

1. Does your supervisor treat you in a polite manner?
2. Does your supervisor treat you with dignity?
3. Does your supervisor treat you with respect?
4. Does your supervisor refrain from improper remarks or comments?

Informational Supervisor Justice Items:

5-point Likert-type scale: 1 (to a very small extent); 2 (to a small extent); 3 (to a moderate extent); 4 (to a large extent); to 5 (to a very large extent)

The following items refer to your supervisor. To what extent:

1. Is your supervisor candid in his/her communications with you?
2. Does your supervisor explain decision-making procedures thoroughly?
3. Are your supervisor's explanations regarding decision-making procedures reasonable?
4. Does your supervisor communicate details (e.g., about decisions and procedures) in a timely manner?
5. Does your supervisor tailor his/her communications to your specific needs?

Interpersonal Coworker Justice Items:

Adapted from Interpersonal Justice (Colquitt, 2001)

5-point Likert-type scale: 1 (to a very small extent); 2 (to a small extent); 3 (to a moderate extent); 4 (to a large extent); to 5 (to a very large extent)

The following items refer to your coworkers. To what extent:

1. Do your coworkers treat you in a polite manner?
2. Do your coworkers treat you with dignity?
3. Do your coworkers treat you with respect?
4. Do your coworkers refrain from improper remarks or comments?

Informational Coworker Justice Items:

5-point Likert-type scale: 1 (to a very small extent); 2 (to a small extent); 3 (to a moderate extent); 4 (to a large extent); to 5 (to a very large extent)

Adapted mainly from Colquitt's (2001) Informational Justice Scale. The following items refer to your coworkers. To what extent:

1. Are your coworkers candid in their communications with you?
2. Do your coworkers explain the decisions they make that impact you?
3. Do your coworkers share information with you about important work-related issues?
4. Do your coworkers pass on information (e.g., messages from supervisors/clients) in a timely manner?
5. Do your coworkers tailor their communications to your specific needs?

Note. Item three of this scale was adapted from De Dreu's (2007) six-item information sharing scale.

Appendix C

Affective Organizational Commitment (Meyer, Allen, & Smith, 1993)

5-point Likert-type scale: 1 (completely disagree); 2 (disagree); 3 (neither agree nor disagree); 4 (agree); 5 (completely agree)

1. I would be very happy to spend the rest of my career in the CF/DND.
2. I really feel as if the CF/DND's problems are my own.
3. I do not feel a strong sense of "belonging" to the CF/DND (reverse-keyed).
4. I do not feel "emotionally attached" to the CF/DND (reverse-keyed).
5. I do not feel like "part of the family" in the CF/DND (reverse-keyed).
6. The CF/DND has a great deal of personal meaning for me.

Affective Supervisor Commitment (adapted items)

5-point Likert-type scale: 1 (completely disagree); 2 (disagree); 3 (neither agree nor disagree); 4 (agree); 5 (completely agree)

1. I would be very happy to spend the rest of my career working with my current supervisor.
2. I really feel as if my supervisor's problems are my own.
3. I do not feel a strong sense of "belonging" with my supervisor (reverse-keyed).
4. I do not feel "emotionally attached" to my supervisor (reverse-keyed).
5. I do not feel like "part of the family" with my supervisor (reverse-keyed).
6. My relationship with my supervisor has a great deal of personal meaning for me.

Affective Coworker Commitment (adapted items)

5-point Likert-type scale: 1 (completely disagree); 2 (disagree); 3 (neither agree nor disagree); 4 (agree); 5 (completely agree)

1. I would be very happy to spend the rest of my career working with my current coworkers.
2. I really feel as if my coworkers' problems are my own.
3. I do not feel a strong sense of "belonging" with my coworkers (reverse-keyed).
4. I do not feel "emotionally attached" to my coworkers (reverse-keyed).
5. I do not feel like "part of the family" with my coworkers (reverse-keyed).
6. My relationships with my coworkers have a great deal of personal meaning for me.

Appendix D

Positive Affective Well-Being Scale Items (Hess, Kelloway, Francis, Catano, & Fleming, 2008)

7-point Likert-type scale: 1 (not at all); 2 (rarely); 3 (once in a while); 4 (some of the time); 5 (fairly often); 6 (often); 7 (all of the time)

In the last six months, I have been feeling ..

1. Motivated
2. Cheerful
3. Enthusiastic
4. Lively
5. Joyful
6. In good spirits
7. Energetic

Appendix E

Scale Acronym Coding Key

DJ	Distributive justice
PJ	Procedural justice
SJint	Supervisor interpersonal justice
SJinf	Supervisor informational justice
CJint	Coworker interpersonal justice
CJinf	Coworker informational justice
OC	Organizational affective commitment
SC	Supervisor affective commitment
CC	Coworker affective commitment
PAWS	Positive Affective Well-Being Scale

Footnotes

¹The workgroup in this study included coworkers and supervisors. All other references included in this section differentiated coworkers from supervisors, so that supervisors did not make up part of the workgroup.

² Removal of the three outliers reduces skew and kurtosis with minimal changes to Cronbach's Alpha. The variable with the worst skew and kurtosis was supervisor interpersonal justice. With the removal of the outliers, skew was reduced from -9.19 to -9.01. For the same variable, kurtosis was also reduced from 6.90 to 6.65. Removing the outliers had minimal impact on scale reliabilities. For example, the coworker interpersonal justice scale reliability was reduced from $\alpha = .927$ to $\alpha = .914$ with the removal of the three outliers. Only two other variables' scale reliabilities were impacted by the removal of the outliers: organizational affective commitment was reduced from $\alpha = .845$ to $\alpha = .843$ and coworker affective commitment reduced from $\alpha = .852$ to $\alpha = .844$.

³ I conducted the analysis for the overall 10-factor (parceled) measurement model and the trimmed partially mediated structural model with and without outliers and the fit indices did not differ substantially. The full 10 factor parceled measurement model with outliers resulted in: $\chi^2(218, N = 305) = 399.00, p < .001$; NFI = .945, CFI = .974, RMSEA = .052, $p > .05$. The full 10 factor parceled measurement model with outliers removed resulted in: $\chi^2(218, N = 302) = 399.69, p < .001$; NFI = .943, CFI = .973, RMSEA = .053, $p > .05$. The trimmed partially mediated structural model with outliers resulted in: $\chi^2(240, N = 305) = 475.20, p < .001$; NFI = .934, CFI = .966, RMSEA = .057, $p > .05$. The trimmed partially mediated structural model with outliers removed

resulted in: $\chi^2 (240, N = 302) = 479.52, p < .001$; NFI = .932, CFI = .965, RMSEA = .058, $p = .05$.

Table 1

Descriptive Statistics for Justice, Commitment, and Positive Affective Well-Being Scales

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Distributive Justice	3.20	1.02	(.96)									
2. Procedural Justice	3.12	.84	.47	(.91)								
3. Supervisor Interpersonal Justice	4.19	.78	.17	.41	(.92)							
4. Supervisor Informational Justice	3.60	.91	.26	.56	.70	(.92)						
5. Coworker Interpersonal Justice	4.16	.71	.12*	.34	.47	.27	(.93)					
6. Coworker Informational Justice	3.80	.77	.24	.47	.34	.41	.68	(.89)				
7. Organizational Commitment	3.57	.73	.28	.31	.13*	.22	.22	.27	(.85)			
8. Supervisor Commitment	3.05	.86	.26	.42	.46	.62	.17	.29	.30	(.88)		
9. Coworker Commitment	3.38	.72	.20	.26	.22	.19	.42	.48	.44	.34	(.85)	
10. Positive Affective Well-Being	5.01	1.17	.34	.40	.35	.42	.28	.30	.48	.31	.32	(.97)

Note. $N = 305$. Reliabilities are presented on the diagonal in parentheses. Constructs 1 through 9 were measured with a 5 point Likert-type scale. Positive Affective Well-Being was measured with a 7 point Likert-type scale. All correlations are significant at $p < .001$, two-tailed, except for those marked with an asterisk (*) indicating correlations significant at the $p < .05$ level (2-tailed)

Table 2

Fit Indices for Competing Justice Measurement Models

Model	χ^2	Df	χ^2_{diff}	Δ_{df}	NFI	CFI	RMSEA
1. Hypothesized six-factor justice model	863.23**	356	Na	Na	.902	.939	.068**
2. Four-factor justice model (distributive, procedural, interactional supervisor, and interactional coworker)	1895.83**	365	1032.60**	9	.784	.817	.117**
3. Four-factor justice model (distributive, procedural, supervisor/coworker interpersonal combined, and supervisor/coworker informational combined)	2781.81**	365	1918.58**	9	.683	.711	.148**
4. Three-factor justice model (distributive and procedural justice combined, supervisor interactional, and coworker interactional)	2868.57**	368	2005.34**	12	.673	.701	.150**
5. Three-factor justice model (distributive, procedural, and interactional). Interactional is comprised of interpersonal and informational justice for both supervisors and coworkers.	3409.75**	368	2446.52**	12	.611	.636	.165**
6. Two-factor justice model (Organizational entities [distributive, procedural, supervisor interpersonal, and supervisor informational] and coworker interpersonal and coworker informational justice combined)	4039.45**	370	3176.22**	14	.539	.561	.181**
7. One-factor justice model	5514.42**	371	4651.19**	15	.371	.385	.214**

Note. Models 2-7 are nested within the six-factor model. ** $p < .001$; PCLOSE values are denoted by the presence or absence of asterisks following the RMSEA value.

Table 3

Fit Indices for Competing Commitment Measurement Models

Model	χ^2	Df	χ^2_{diff}	Δ_{df}	NFI	CFI	RMSEA
1. Hypothesized three-factor commitment model	397.141**	114	Na	Na	.879	.910	.090**
2. Two-factor commitment model (Organizational and supervisor commitment; coworker commitment separate)	1027.16**	116	630.02**	2	.688	.710	.161**
3. One-factor commitment model	1697.45**	117	1300.31**	3	.485	.497	.211**

Note. Models 2, and 3 are nested within the three-factor model. ** $p < .001$; PCLOSE

values are denoted by the presence or absence of asterisks following the RMSEA value.

Table 4

Item Parcel Composition

Parcel	Loading	Factor	Item #	Item
DJ 1	.957	1	3	To what extent do your outcomes reflect what you have contributed?
	.896	1	1	To what extent do your outcomes reflect the effort you have put into your work?
DJ 2	.951	1	2	To what extent are your outcomes appropriate for the work you have completed?
	.912	1	4	To what extent are your outcomes justified, given your performance?
PJ 1	.817	1	4	To what extent are decision-making procedures free of bias?
	.560	1	7	To what extent do decision-making procedures uphold ethical and moral standards?
PJ 2	.813	1	3	To what extent are decision-making procedures applied consistently?
	.772	1	5	To what extent are decision-making procedures based on accurate information?
PJ 3	.813	1	6	To what extent are you able to appeal the outcomes arrived at by decision-making procedures?
	.784	1	1	To what extent are you able to express your views and feelings during decision-making procedures?
	.775	1	2	To what extent do you have influence over the outcomes arrived at by decision-making procedures?
SInt 1	.956	1	2	To what extent does your supervisor treat you with dignity?
	.686	1	4	To what extent does your supervisor refrain from improper remarks or comments?
SInt 2	.929	1	1	To what extent does your supervisor treat you in a polite manner?
	.925	1	3	To what extent does your supervisor treat you with respect?
CInt 1	.968	1	2	To what extent do your coworkers treat you with dignity?
	.700	1	4	To what extent do your coworkers refrain from improper remarks or comments?
CInt 2	.927	1	1	To what extent do your coworkers treat you in a polite manner?
	.923	1	3	To what extent do your coworkers treat you with respect?
SInf 1	.815	1	5	To what extent does your supervisor tailor his/her communications to your specific needs?
	.672	1	1	To what extent is your supervisor candid in his/her communications with you?
SInf 2	.909	1	2	To what extent does your supervisor explain decision-making procedures thoroughly?
	.900	1	3	To what extent are your supervisor's explanations regarding decision-making procedures reasonable?
	.860	1	4	To what extent does your supervisor communicate details (e.g., about decisions and procedures) in a timely manner?

CInf 1	.774	1	5	To what extent do your coworkers tailor their communications to your specific needs?
	.624	1	1	To what extent are your coworkers candid in their communications with you?
CInf 2	.909	1	3	To what extent do your coworkers share information with you about work-related issues?
	.838	1	2	To what extent do your coworkers explain the decisions they make that impact you?
	.818	1	4	To what extent do your coworkers pass on information (e.g., messages from supervisors/clients) in a timely manner?
OC 1	.837	1	4	I do not feel "emotionally attached" to the CF/DND.
	.453	1	2	I really feel as if the CF/DND's problems are my own.
OC 2	.759	1	5	I do not feel like "part of the family" in the CF/DND.
	.631	1	1	I would be very happy to spend the rest of my career with the CF/DND.
OC 3	.759	1	3	I do not feel a strong sense of "belonging" to the CF/DND.
	.708	1	6	The CF/DND has a great deal of personal meaning for me.
SC 1	.831	1	4	I do not feel "emotionally attached" to my supervisor.
	.419	1	2	I really feel as if my supervisor's problems are my own.
SC 2	.875	1	5	I do not feel like "part of the family" with my supervisor.
	.705	1	1	I would be very happy to spend the rest of my career working with my current supervisor.
SC 3	.828	1	3	I do not feel a strong sense of "belonging" with my supervisor.
	.773	1	6	My relationship with my supervisor has a great deal of personal meaning for me.
CC 1	.790	1	4	I do not feel "emotionally attached" to my coworkers.
	.751	2	2	I really feel as if my coworkers' problems are my own.
CC 2	.855	1	5	I do not feel like "part of the family" with my coworkers.
	.450	2	1	I would be very happy to spend the rest of my career working with my current coworkers.
CC 3	.935	1	3	I do not feel a strong sense of "belonging" with my coworkers.
	.650	2	6	My relationships with my coworkers have a great deal of personal meaning for me.
Paws 1	.941	1	6	In the last six months, I have been feeling...in good spirits
	.780	1	1	In the last six months, I have been feeling...motivated
Paws 2	.940	1	3	In the last six months, I have been feeling...enthusiastic
	.879	1	7	In the last six months, I have been feeling...energetic

Paws 3	.931	1	4	In the last six months, I have been feeling...lively
	.927	1	5	In the last six months, I have been feeling...joyful
	.923	1	2	In the last six months, I have been feeling...cheerful

Table 5

Fit Indices for the Competing Path Models

Path Model	χ^2	Df	χ^2_{diff}	Δ_{df}	NFI	CFI	RMSEA
1. Hypothesized Full Mediation Model	498.05**	239	Na	Na	.931	.963	.060*
2. Partial Mediation Model (6 additional paths from Justice to PAWS)	468.60**	233	29.45**	6	.935	.966	.058*
3. Unmediated Model (direct links from Justice to commitment and justice to PAWS & no link between commitment and PAWS)	518.24**	236	49.6**	3	.928	.959	.063*

Note. Path model 1 is nested within path model 2 and path model 3 is nested within path model 2; ** $p < .001$ * $p < .05$ $N = 305$; PCLOSE values are denoted by the presence or absence of asterisks following the RMSEA value.

Table 6

Fit Indices for the Trimmed and Untrimmed Partial Mediation Path Models

Path Model	χ^2	<i>Df</i>	χ^2_{diff}	Δdf	NFI	CFI	RMSEA
1. Partial Mediation (6 additional paths - Justice to PAWS)	468.60**	233	Na	Na	.935	.966	.058*
2. Trimmed Partial Mediation (Non significant paths removed)	475.17**	240	6.57 <i>ns</i>	7	.934	.966	.057*

Note. ** $p < .001$ * $p < .05$ $N = 305$; PCLOSE values are denoted by the presence or absence of asterisks following the RMSEA value.

Figure Captions

Figure 1. Multi-foci Model of Justice, Commitment, and Positive Affective Well-Being.

Figure 2. Six-Factor Justice Measurement Model. ** significant at $p < .001$.

* significant at $p < .05$. † marginally significant ($p = .06$ to $.10$).

Figure 3. Three-Factor Commitment Measurement Model. ** significant at $p < .001$.

* significant at $p < .05$. † marginally significant ($p = .06$ to $.10$).

Figure 4. The Full Parceled Measurement Model. ** significant at $p < .001$. * significant at $p < .05$. † marginally significant ($p = .06$ to $.10$).

Figure 5. Fully Mediated Structural Model. All justice facets were allowed to correlate.

** significant at $p < .001$. * significant at $p \leq .05$. † marginally significant ($p = .06$ to $.10$).

Figure 6. Partially Mediated Structural Model. All justice facets were allowed to

correlate. ** significant at $p < .001$. * significant at $p < .05$. † marginally significant ($p = .06$ to $.10$).

Figure 7. Unmediated Structural Model. All justice facets were allowed to correlate.

** significant at $p < .001$. * significant at $p < .05$. † marginally significant ($p = .06$ to $.10$).

Figure 8. Trimmed Partially Mediated Structural Model. All justice facets were allowed

to correlate. ** significant at $p < .001$. * significant at $p < .05$. † marginally significant ($p = .06$ to $.10$).

Figure 1.

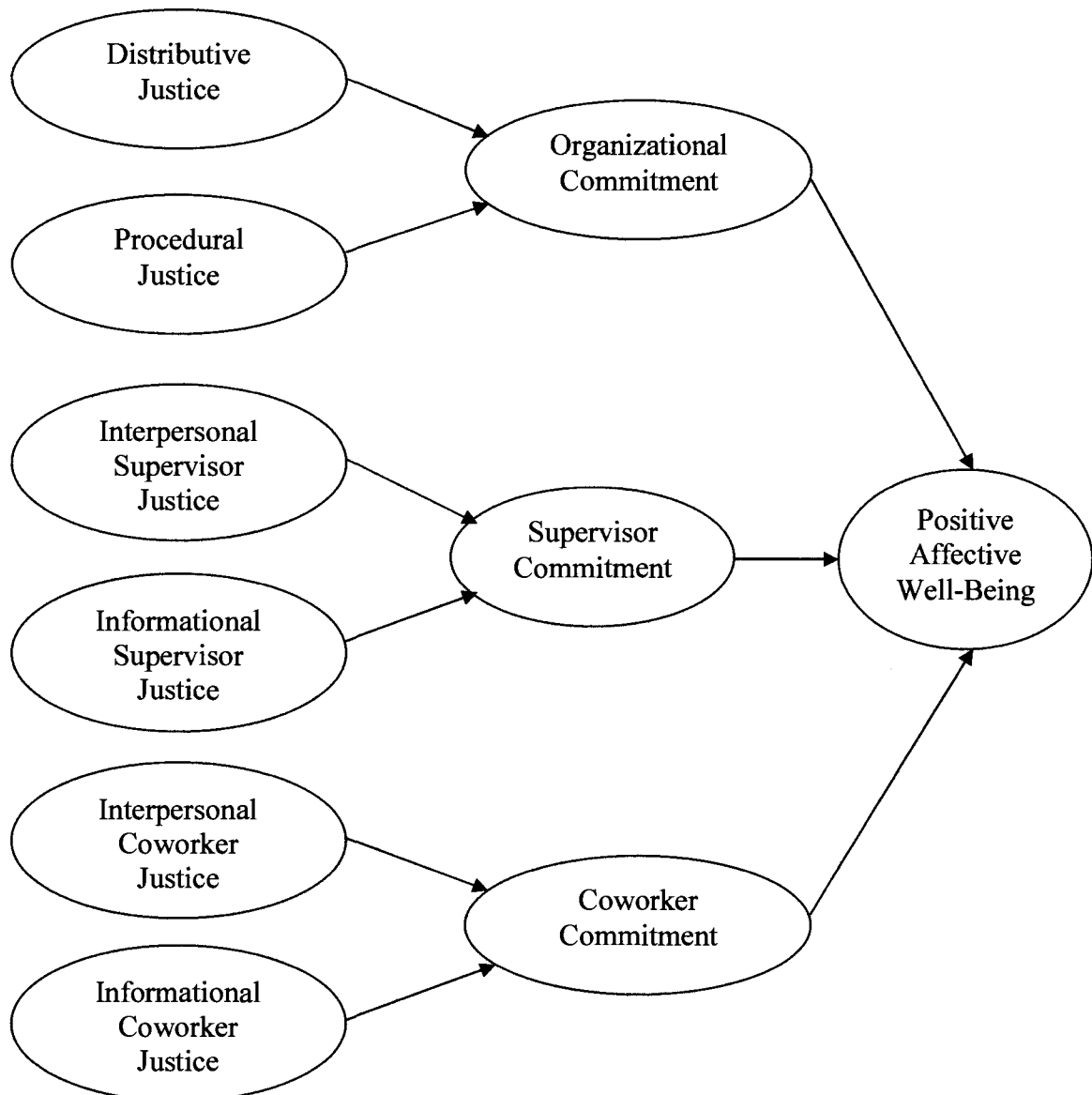


Figure 2.

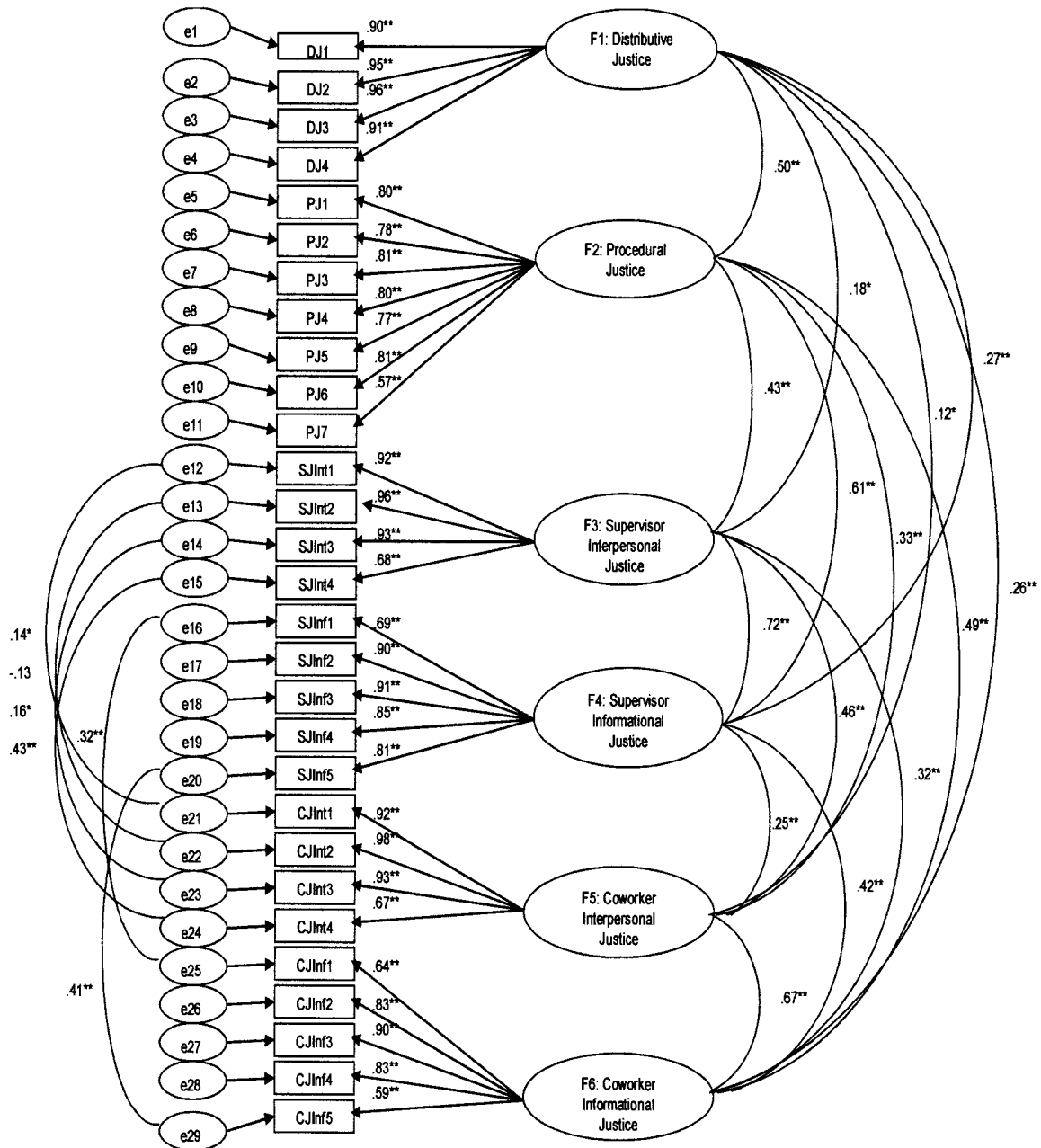


Figure 3.

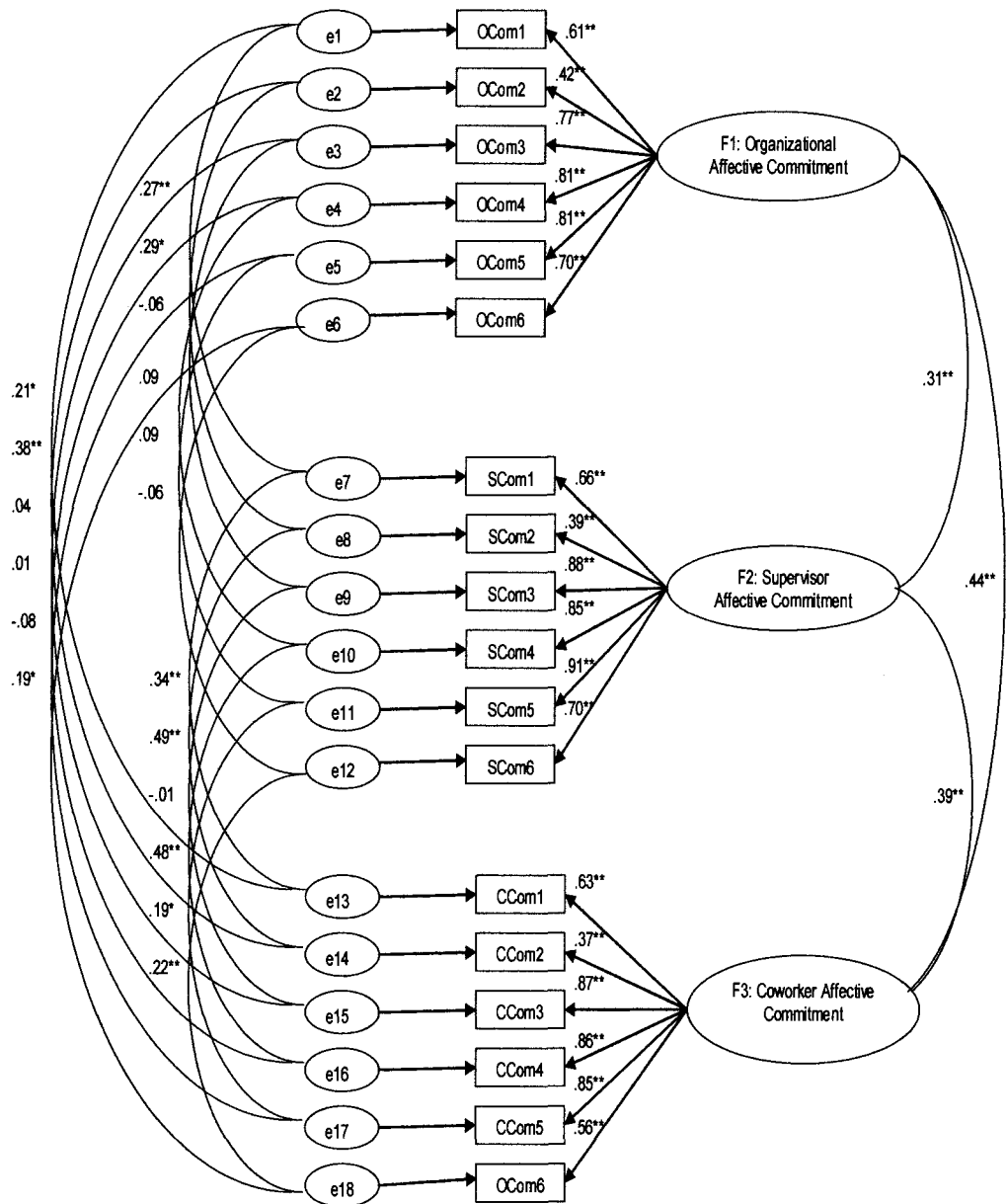


Figure 4.

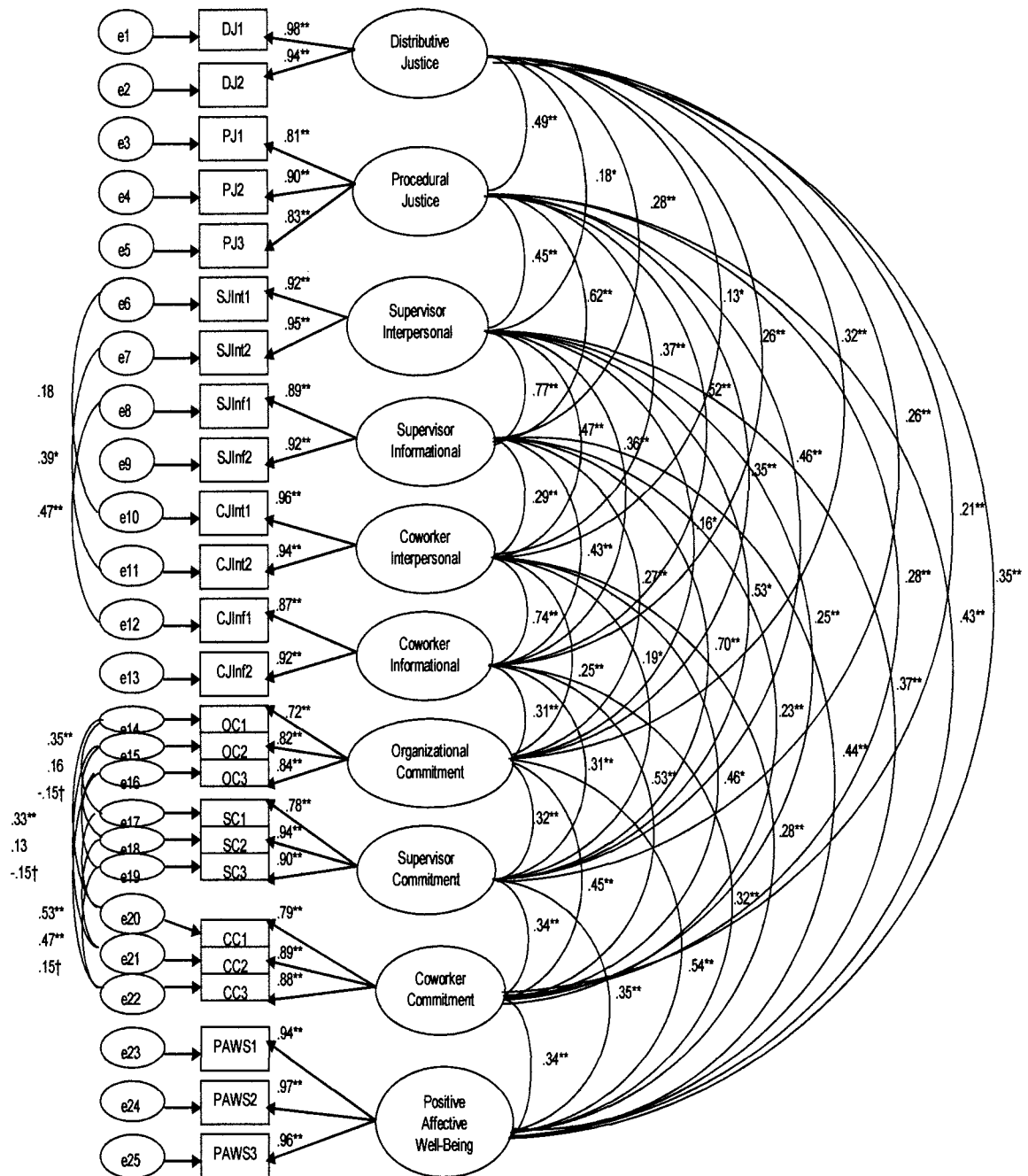


Figure 5.

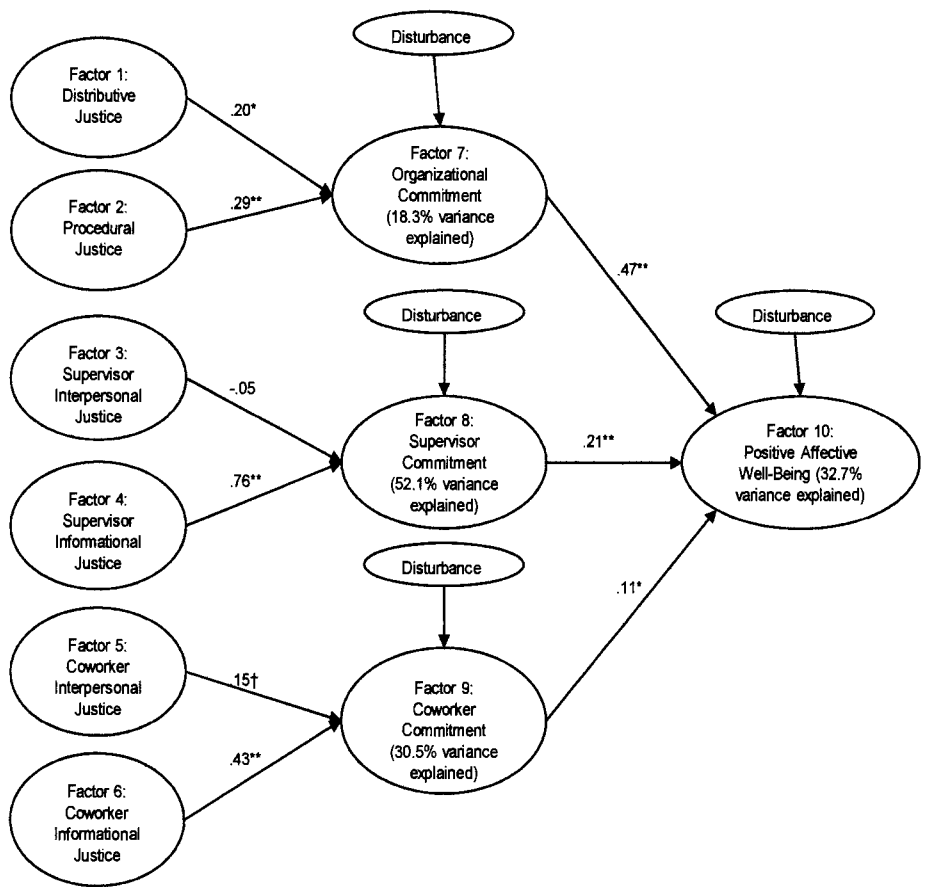


Figure 6.

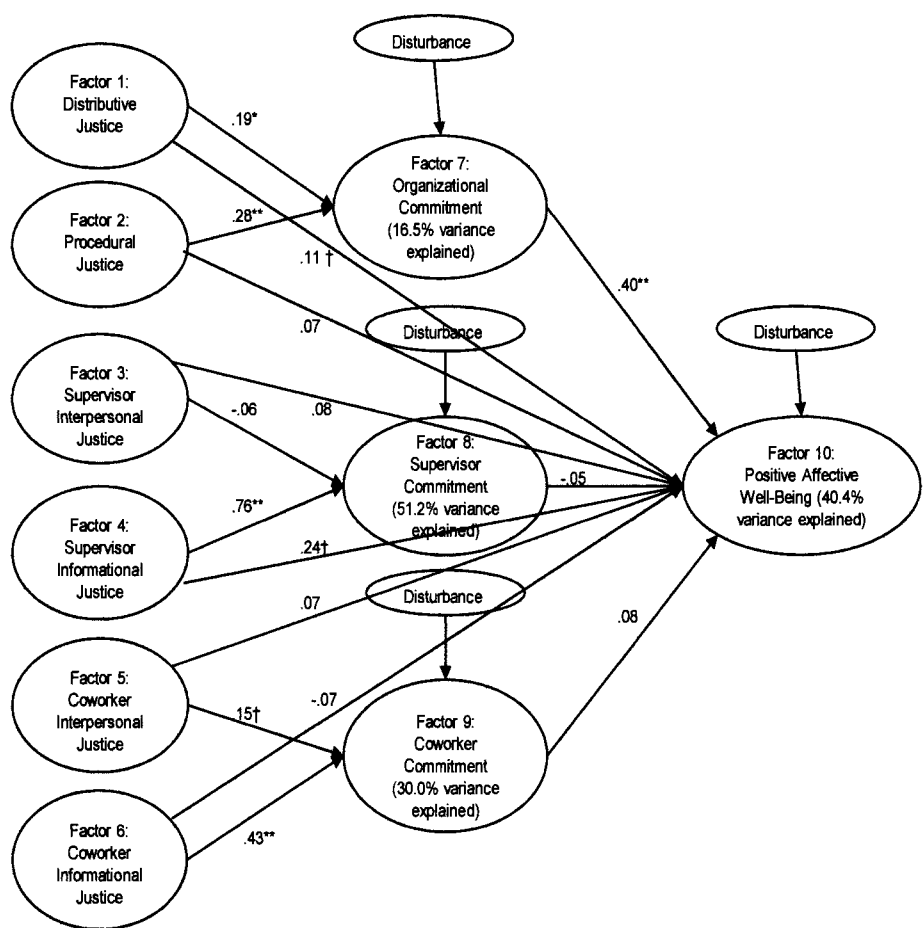


Figure 7.

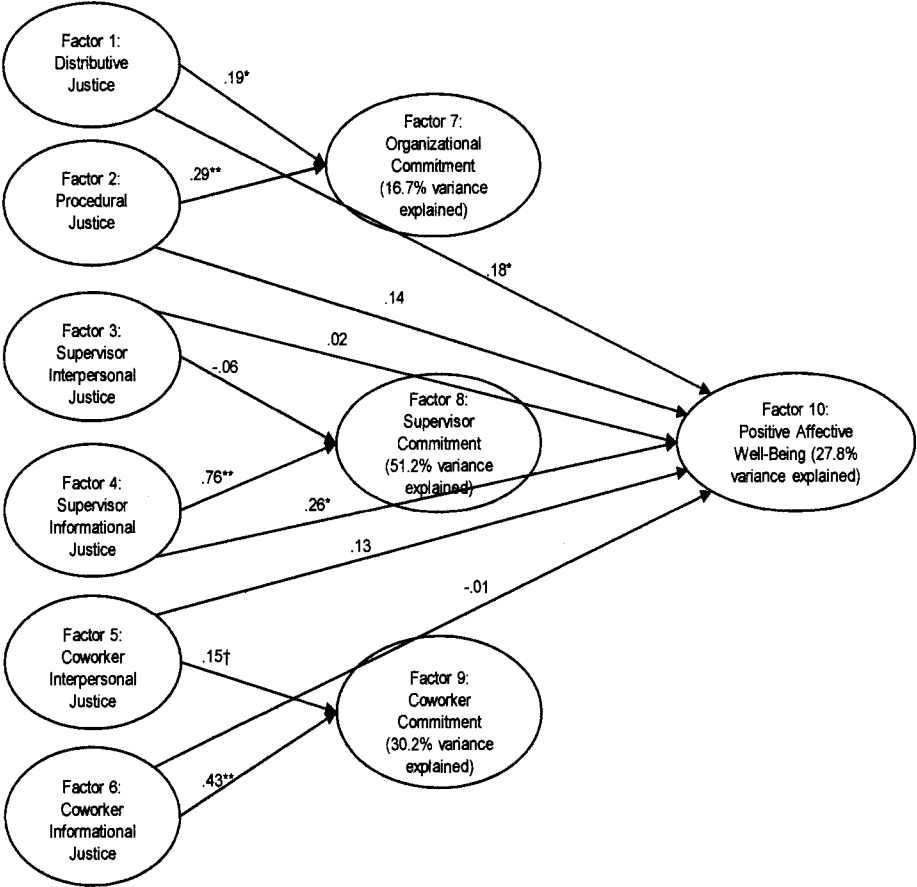
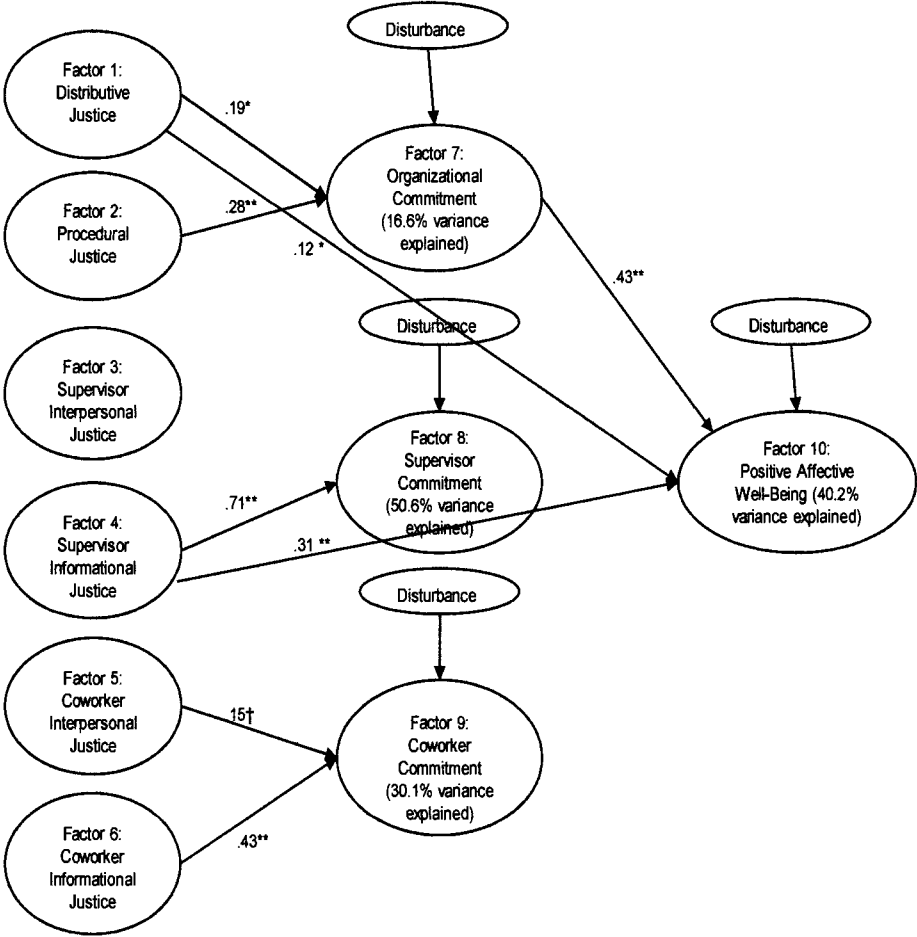


Figure 8.





SAINT MARY'S
UNIVERSITY SINCE 1802

One University. One World. Yours.

PATRICK POWER
LIBRARY

Department Office
T 902.420.5534
F 902.420.5561

Research Ethics Board Certificate Notice

The Saint Mary's University Research Ethics Board has issued an REB certificate related to this thesis. The certificate number is: 09-007 .

A copy of the certificate is on file at:

Saint Mary's University, Archives
Patrick Power Library
Halifax, NS
B3H 3C3

Email: archives@smu.ca
Phone: 902-420-5508
Fax: 902-420-5561

For more information on the issuing of REB certificates, you can contact the Research Ethics Board at 902-420-5728/ ethics@smu.ca .