ABSTRACT

Title of Dissertation: ORGANIZATIONAL STRUCTURE AND
INTERNAL COMMUNICATION AS
ANTECEDENTS OF EMPLOYEE-
ORGANIZATION RELATIONSHIPS
IN THE CONTEXT OF ORGANIZATIONAL
JUSTICE: A MULTILEVEL ANALYSIS

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One research direction that is needed but has not been fully exploited in studies of organization-public relationships is research on the antecedents of relationships. The antecedents of relationships are the first stage of the relationship framework, for they are what cause specific relationships between an organization and its publics to develop.

The purpose of this study was to explore possible antecedents of internal relationships in organizations. I examined the direct and indirect influences of organizational structure and internal communication on employee-organization relationships using organizational justice as a mediating factor. Organizational justice is a relatively recently developed but widely used concept in organizational studies that refers to the extent to which people perceive organizational events as being fair.

This study was a typical example of multilevel research in that it gathered and summarized individual-level data to operationalize organizational-level constructs

such as organizational structure and internal communication. The multilevel nature of the main constructs of this study was addressed by using the multilevel analysis method.

Data were collected by conducting a survey of about 1,200 employees in 31 Korean organizations. I used hierarchical linear modeling (HLM), which is a type of random coefficient model and is specifically designed to accommodate nested or multilevel data structure, to test the cross-level hypotheses of this study.

The findings suggested that organizational structure and the system of internal communication were associated with employee-organization relationships, playing the role of antecedents of internal relationships. More specifically, asymmetrical communication was negatively related to employees' commitment, trust, and satisfaction. Also it was shown that symmetrical communication was associated positively with communal relationships. Lastly, organic structure was negatively related to exchange relationships and positively related to trust and control mutuality.

On the other hand, organizational justice was associated with organizational structure and internal communication as well as with employee-organization relationships. Organizational justice also mediated the effects of symmetrical communication and organizational structure on communal relationships and four relationship outcomes (control mutuality, trust, commitment, and satisfaction), implying that symmetrical communication and organic structure can contribute to building quality relationships when they are combined with fair behavior by management.

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A MULTILEVEL ANALYSIS

by

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Dedication

I dedicate this dissertation to my loving family, especially to my father who passed

away on March 25, 2005. This work could not have been completed without their love

and support.

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Academic research requires the support of many people. Great appreciation is expressed to all those who offered me their assistance and words of encouragement during the completion of this study.

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Highest thanks to my family, and especially to the memory of my father. Without them, none of this would have been possible. They loved and believed in me.

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CHAPTER I

PURPOSE AND INTRODUCTION

Overview

A growing body of research has shown that relationship management has positive effects on organizational objectives (Hon & J. Grunig, 1999; Huang, 2001; Ledingham, 2000). Building favorable relationships between an organization and its publics contributes to desirable organizational outcomes such as organizational effectiveness and increased organizational profits and sales. One research direction that is needed but has not been fully exploited in relationship studies is research on the antecedents of relationships. The antecedents of relationships are the first stage of the relationship framework (Broom, Casey, & Ritchey, 2000), for they are what cause specific relationships between an organization and its publics to develop.

The purpose of this study was to integrate two of those possible antecedents into employee-organization relationship research. I explored the influence of *organizational structure* and *internal communication* on dimensions of employee-organization relationships using *organizational justice* as a mediating factor. More specifically, I sought answers to the following questions: 1) To what extent is organizational structure related to internal communication? 2) To what extent are organizational structure and internal communication related to organizational justice? 3) To what extent is organizational justice associated with employee-organization relationships? 4) To what extent are organizational structure and internal communication associated with employee-organization relationships? 5) Does organizational justice mediate the associations between structure/ communication and employee-organization relationships?

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This study attempted to answer the above questions by conducting a survey of employees in Korean organizations. Measurement items taken from studies of relationship management, organizational structure and communication, and organizational justice were employed. In addition, the multilevel nature of main constructs of this study was addressed by using the *multilevel analysis* method.

Theoretical and Methodological Problems in Public Relations Research

Recently, researchers (e.g., Broom et al., 2000; Bruning & Ledingham, 1999; J. Grunig & Huang, 2000; Hon & J. Grunig, 1999; Huang, 2001) have found that public relations has value to an organization and to society because it helps to build quality, long-term relationships with strategic publics. Bruning and Ledingham (2000) noted that the view of public relations as relationship management represented a conceptual change. The relational management perspective shifts public relations practice from manipulating public opinion through communication messages to a combination of "symbolic communication messages and organization behaviors to initiate, nurture, and maintain mutually beneficial organization-public relationships" (p. 87).

However, there has been far less research to develop theories for relationship building (Broom et al., 2000; J. Grunig & Huang, 2000). This is especially the case for antecedents of relationships. The antecedents of relationships have paramount importance in relationship research because they cause specific relationships between an organization and its publics to develop. Even though the importance of antecedents of relationships was recognized among public relations scholars (e.g., Broom, Casey, & Ritchey, 1997; Broom et al., 2000; J. Grunig & Huang, 2000), there has been little research to examine the nature and functions of relationship antecedents.

Neglect of antecedents of relationships can be explained in part by the tendency of current relationship research. Most recent research on relationships has delved only into outcome variables among three relationship constructs (antecedents, cultivation strategies, and outcomes). Many studies have explored two types of relationships and four types of outcomes. However, regarding antecedents, there have been only a couple of studies (Broom et al., 2000; J. Grunig & Huang, 2000), at a conceptual level. Public relations researchers should start paying attention to this relatively neglected area to fully understand what the organization-public relationship is.

Another theoretical void within relational research in public relations is found in the employee relations area. Public relations scholars argue that it is important to build relationships with strategic constituencies for an organization to be effective. However, only a few public relations scholars (e.g., J. Grunig, 1992c; L. Grunig, J. Grunig, & Dozier, 2002; Holtzhausen, 2002) have paid attention to employee publics. Many organizations consider external public constituencies carefully but ignore employee publics on the assumption the organizations always can count on employee loyalty and commitment. D'Aprix (1984) acknowledged this and said, "one of the great ironies in the practice of public relations is our tendency to shortchange the employee audience in our organization" (p. 102).

Employee relationships are the building block of the strategic management of communication between an organization and its external publics. Recognizing this significance almost two decades ago, Cutlip, Center, and Broom (1985) posited that no organizational relationships were as important as those with employees. They noted that the first step in promoting positive external public relations is achieving

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good internal public relations. Nevertheless, it is true that organizations' employee relationships have not been in the spotlight of relationship studies.

This study was an effort to fill this gap in relationship research. Actually, maintaining good relationships with internal publics is one of the major responsibilities of public relations managers (Holtzhausen, 2002). Thus, among relationships with publics, the focus of this study was intra-organizational relationships, especially *employee-organization relationships.* Intra-organizational relationships were chosen because this study examined relationships in an organizational context, which includes organizational structure and internal communication. Employee-organization relationships seemed to be directly affected by organizational structure and internal communication.

Some may doubt how every employee can have a direct relationship with an organization. From a public relations perspective, it has to be made clear that relationships include both direct and indirect influences that either party makes on the other (J. Grunig & Hunt, 1984). This unique function of relationships in public relations management stems from the fact that public relations has to deal with publics, which are *groups of people*, not individuals.

On the other hand, recent developments in research on inside organizational phenomena call for more precise and elaborate statistical analysis. This is because organizations are hierarchically nested systems (House, Rousseau, & Thomas-Hunt, 1995). They are multilevel by nature. For example, employees work in groups and teams within organizations that are interrelated with other organizations (Klein, Dansereau, & Hall, 1994). Thus, no construct is "level free" in organizational research and researchers who examine organizational phenomena always encounter levels

issues (Klein et al., 1994, p. 198). According to Klein and Kozlowski (2000), neglecting these systems' structure in research design will "result in an incomplete and mis-specified model" (p. 232). It is because "findings at one level of analysis do not generalize neatly and exactly to other levels of analysis" (p. 213).

Organizational psychology and organizational communication researchers have addressed the macro-micro and levels problems and offered new resources for theory development. For example, organizational psychology scholars have witnessed the evolution of multilevel frameworks that have well-developed conceptual foundations and associated analytic methodologies (Kozlowski & Klein, 2000). Also, substantive theoretical advances in organizational communication have been achieved by progress at multilevel analysis (McPhee & Poole, 2001).

However, levels issues have not surfaced in public relations research. This study tried to fill this gap by adopting the multilevel analysis method from organizational studies. By doing so, this study contributed to advancing methodological developments in public relations research. To fill the identified gaps, this research explored the possible antecedents of employee-organization relationships using multilevel analysis.

Theoretical Framework of the Study

In order to develop an antecedent model of employee relationships, I reviewed interdisciplinary literature that dealt with the links between employees' perceptions of justice and relationships and organizational contexts such as structure and internal communication. Major theoretical concepts framing this study included relationship management, organizational structure and internal communication, and organizational justice. Thus, the literature review can be categorized into three large sections. The

first section deals with relevant public relations theories, especially the relationship management perspective. The second section examines organizational structure and internal communication as two possible internal relationship antecedents. The third section reviewes the literature of organizational justice, which mediates the influence of structure and internal communication on employee relationships, thus seeking linkages among four main constructs.

Relationship Management Theory

In public relations, the organization-public relationship (OPR) is conceptualized as a status of connection or association between an organization and its publics. J. Grunig and Huang (2000) developed a comprehensive theory of OPR by consulting Stafford and Canary's (1991) relationship maintenance strategies, management theories for organizational effectiveness, and Plowman's (1995) conflict resolution strategies. They provided methods for evaluating relationships in each stage: relationship antecedents, cultivation strategies, and relationship outcomes.

In exploring relationship management perspectives, I mainly adopted J. Grunig and Huang's (2000) three-stage model because I thought it provided an effective framework for understanding the various aspects of OPR. Through the examination of the model, I proposed the need for further research on relationship antecedents. Meanwhile, two types of relationships and four types of outcomes were used to assess employee-organization relationships in this study. This study adopted Hon and J. Grunig's (1999) two-type typology for relationships (communal and exchange relationship) and four types of outcomes (control mutuality, trust, commitment, and satisfaction) because of its recognized significance and wide acceptance in public relations research.

Organizational Structure and Internal Communication

as Antecedents of Relationships

I selected *organizational structure* (J. Grunig, 1992b, p. 225) and *internal communication* (J. Grunig, 1992b, p. 231) as two key antecedents that this study examined. I chose the above two constructs because this study primarily explored internal relationships in organizations. Among many possible factors, I argued that organizational structure and internal communication might be the strongest antecedents of employee-organization relationships.

Organizational structure can be defined as the ways in which responsibility and power are allocated and work procedures are carried out by organizational members (Blau, 1970; Dewar & Werbel, 1979; Germain, 1996; Gerwin & Kolodny, 1992). For this study, I adopted L. Grunig et al.'s (2002) five dimensions of organizational structure: centralization, stratification, formalization, complexity, and participation in decision-making.

Internal communication is "a specialized sub-discipline of communication that examines how people communicate in organizations and the nature of effective communication systems in organizations" (L. Grunig et al., 2002, p. 486). In this study I adopted L. Grunig et al.'s (2002) two-type typology of internal communication because of its theoretical and practical significance in public relations research: symmetrical and asymmetrical communication.

I examined the direct and indirect influences of internal communication and structure on employee-organization relationships using organizational justice as a mediating factor. This study, first, examined the direct effect of the two antecedents on employee relationships. Previous research has suggested that organizational justice

might mediate the impact of organizational structure and internal communication on employee relationships (e.g., Ambrose & Schminke, 2001; Aryee, Budhwar, & Chen, 2002; Bies & Shapiro, 1987; Lamertz, 2002; Masterson, 2001; Masterson, Lewis, Goldman, & Taylor, 2000; Sheppard, Lewicki, & Minton, 1993; Viswesvaran & Ones, 2002). Thus, I examined the mediating effect of organizational justice between relationship antecedents and relationship types and outcomes.

Prior research also has shown that the formal organization structure could affect internal communication (Galbraith, 1973; Thompson, 1967, as cited in Lau, Wong, Chan, & Law, 2003). The influence of organizational structure on internal communication is well exemplified in the research by Holtzhausen (2002), J. Grunig (1992c), and L. Grunig et al. (2002). In this study, I also attempted to examine the relationship between organizational structure and internal communication.

<div align="center">Organizational Justice</div>

Organizational justice is a relatively recently developed but widely used concept in organizational studies that refers to "the extent to which people perceive organizational events as being fair" (Colquitt & Greenberg, 2003, p. 166). Even though there is debate about the types of justice, organizational justice is generally believed to take three major forms: distributive, procedural, and interactional justice.

1. *Distributive justice*: The perceived fairness of decision outcomes, such as pay. Distributive justice is promoted by following appropriate norms (e.g., equity, equality, or need) for allocating resources (Adams, 1965; Deutsch, 1975; Homans, 1961; Leventhal, 1976, as cited in Colquitt & Greenberg, 2003).

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2. *Procedural justice*: The perceived fairness of the procedures used to make decisions. Procedural justice is fostered by the use of certain procedural rules such as granting voice in the decision-making processes (i.e., *process control*) and making decisions in a manner that is consistent, accurate, and correctable and that suppresses bias (Leventhal, 1980; Thibaut & Walker, 1975).

3. *Interactional justice*: The perceived fairness of how decisions are enacted by authority figures. Interactional justice has an *interpersonal* component, which is fostered by dignified and respectful treatment, and an *informational* component, which is fostered by adequate and honest explanations (Bies, 2001; Bies & Moag, 1986).

I was interested in incorporating the theory of organizational justice into public relations research because the theory allows studying organizational phenomena from the perspective of employees rather than employers. Also, the theory is based on a symmetrical worldview, which best represents the value public relations holds for society (Colquitt & Greenberg, 2003; J. Grunig & White, 1992). Furthermore, prior research in organizational studies has produced considerable evidence that justice mediates the influence of structure and internal communication on employees' perceptions of internal relationships.

Organizational structure and internal communication seemed to have effects on organizational justice (Lee, 2001; Schminke & Cropanzano, 1998; Schminke, Cropanzano, & Rupp, 2002). Much empirical support exists for the influence of perceptions of fairness on employees' satisfaction, commitment, and trust, which are three of the relationship outcomes in public relations research (Aryee, Budhwar, & Chen, 2002; Colquitt & Greenberg, in press; J. Grunig & Huang, 2000; Hon & J.

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Grunig, 1999; Huang, 2001; Lamertz, 2002; Masterson, 2001; Masterson et al., 2000; Viswesvaran & Ones, 2002). This suggested that there are close linkages between organizational justice and relationship dimensions.

Among three types of organizational justice, this study focused on the two most relevant types of justice: procedural and interactional justice. Prior research has shown that procedural justice and interactional justice are associated more with organizational commitment, supervisory commitment, organizational citizenship behaviors, job performance ratings, and trust in management than distributive justice (e.g., Masterson et al., 2000; Schminke, Ambrose, & Cropanzano, 2000). Also, the two relationship antecedents of this study seemed to have more influence on procedural and interactional justices than on distributive justice.

Delimitations

The main purpose of this study was not to explore the impact of the social-cultural-political variables on employees' perceptions of relationships. In other words, this study was not designed to investigate how the constructs examined interact with their social-cultural-political contexts but rather to investigate the relationships between the organizational constructs such as structure, internal communication, and justice and organizational relationships. Thus, even though this study was conducted in Korea, social-cultural-political impacts were not the focus of the research. Also, research on other possible antecedents and mediating factors that affect employee-organization relationships was beyond the scope of this study because this study focused on organizational contexts that influence relationships, such as structure and internal communication.

Methodology and Ethical Considerations

In this study, I collected data to test a pre-established model rather than using theory to explain data. Also, this study attempted to develop an antecedent model of organizational relationships and to examine the links among main concepts. To meet these concerns, I used a quantitative method. Data were collected by conducting a survey of employees across Korean corporations. The aforementioned levels issue was addressed by applying multilevel analysis.

Before conducting research, I submitted appropriate documentation for review by the Human Subjects Committee of the Department of Communication and the Institutional Review Board of the University of Maryland. In addition to this procedure, I took several ethical issues into consideration. At the outset of the study, I contacted participating organizations via a letter. The letter contained information about my identity as a researcher, purpose of the study, and methods. Issues of anonymity, potential benefits the organizations would get from participation, and time commitment of participants were also explained. No participants were forced to participate or disclose information. Further discussion of ethical issues was provided in the methodology chapter.

Significance of the Study

I think this study produced the following contributions: First, this study departed from previous relationship studies in that it was an endeavor to develop concrete employee-organization relationship antecedent dimensions. By doing so, it also shed light on the issue of how to develop and maintain good employee relationships in a real organizational setting, thus contributing to public relations studies from a practical perspective. Moreover, this study contributed to the body of

knowledge in public relations by introducing the organizational justice theory into relationship theory and by exploring how the justice theory can be related to organizational structure and internal communication as well as to the employee-organization relationships. Also, I attempted to advance methodological developments in public relations research by employing the multilevel analysis method.

CHAPTER II

CONCEPTUALIZATION

The purpose of this study was to explore possible antecedents of internal relationships in organizations. The influence of organizational structure and internal communication on employee-organization relationships in the context of organizational justice was the primary interest of the study. In this chapter, I attempt to locate research hypotheses within a theoretical framework through review of relevant literature. I identify gaps in previous research, which I hope this study will fill.

For this purpose, in the first section, relationship management theory is reviewed because of its importance as a building block of this study. In this section, I discuss the definition of relationships, types of relationships, and relationship constructs such as relationship antecedents, relationship cultivation, and relationship outcomes. Second, organizational structure and internal communication concepts are adopted as possible antecedents of employee-organization relationships. Finally, I introduce the organizational justice concept from organizational psychology theory to test its mediating effect between antecedents of relationships and relationship types and outcomes.

By integrating the rich set of findings on relationship management and organizational structure and internal communication in public relations studies with the organizational justice literature, I developed a relationship antecedent model (Figure 1). This chapter develops the linkages within the model.

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                Structure
            - Centralization
            - Participation
            - Stratification                              H7c&d
            - Formalization
            - Complexity                                              Relationship
              (org.level)                               Types
                                                        - Communal Relationship
                              H3        Justice         - Exchange Relationship
                                    - Procedural Justice Outcomes
                H1                  - Interactional Justice - Trust
                              H4      (indi. level)  H2&5 - Satisfaction
                                                        - Commitment
                                                        - Control Mutuality
                                                          (indi. level)
              Internal                   H7a&b
            Communication

            - Symmetrical COMM
            - Asymmetrical
              COMM                        H6s
              (org.level)
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Figure 1. An initial conceptual model.

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The Relationship Management Perspective in Public Relations

Throughout the history of public relations, practitioners and scholars have attempted to identify a concept that defines the value of public relations. One of the most important theoretical foundations on the value of public relations was found in *the Excellence theory* proposed by the International Association of Business Communicators (IABC) research team (J. Grunig, 1992a).

Since 1985, funded by the IABC Research Foundation and led by J. Grunig, a team of six researchers has conducted research on characteristics of excellent public relations departments and on how such departments make their organizations more effective. Through a combination of survey research and qualitative research, the researchers identified the characteristics of an excellent public relations or corporate communications department: 1) Involvement of public relations in strategic management, 2) empowerment of public relations in the dominant coalition or a direct reporting relationship to senior management, 3) integrated public relations function, 4) public relations as a management function separate from other functions, 5) public relations unit headed by a manager rather than a technician, 6) two-way symmetric model of public relations, 7) symmetric system of internal communication, 8) knowledge potential for managerial role and symmetrical public relations, 9) diversity embodied in all roles, 10) ethics and social responsibility (J. Grunig, 1992a). The IABC research team explained how public relations has value to an organization and contributes to organizational effectiveness (L. Grunig, J. Grunig, & Ehling, 1992).

The researchers of the *Excellence* study explained the value of public relations by suggesting that an organization must build long-term, positive relationships with strategic publics (L. Grunig et al., 1992). However, it was not until the last few years

that relationship building and management of relationships with the publics emerged as a key research interest in public relations. Recently, many researchers (e.g., Broom et al., 2000; Bruning & Ledingham, 1999; J. Grunig & Huang, 2000; Hon & J. Grunig, 1999; Huang, 2001) found that building favorable relationships between an organization and its publics contributes to desirable organizational outcomes such as organizational effectiveness and increased organizational profits and sales.

The notion that relationships should be at the core of public relations scholarship and practice appears first to have been advocated by Ferguson (1984). In an invited paper to the Public Relations Division of the Association for Education in Journalism and Mass Communication, Ferguson reviewed nine years of research published in *Public Relations Review* and concluded that a paradigm focus of the field "would greatly enhance the probability of productive theory development" (p. ii). That paradigm focus, she added, should be on relationships: "By this, the author means that the unit of study should not be the organization, nor the public, nor the communication process. Rather the unit of study should be the relationship between organizations and their publics" (p. ii).

Following Ferguson's (1984) call for a focus on relationships in public relations research, scholars slowly directed their efforts toward the challenging task of conceptualizing and measuring the quality of relationships. For example, at the beginning of the 1990s, L. Grunig et al. (1992) emphasized the significance of the relationship issue, stating, "the nature of relationships between organizations and stakeholders—which may be publics or other organizations—emerged, then, as a central concept in a theory of public relations and organizational effectiveness" (p. 81). J. Grunig (1993) also argued that practitioners must be concerned about

behavioral relationships rather than just focusing on the symbolic relationships between organizations and key publics.

According to Ledingham and Bruning (2000), the emergence of relationship management as a perspective of public relations scholarship and practice called into question the essence of public relations – what public relations is and what it does or should it do; what is its function and value within an organization and in society; and what are the benefits that accrue to the organizations, to the publics an organization serves, and to the communities and societies in which they operate.

Also, Bruning and Ledingham (2000) noted that the view of public relations as relationship management represented a conceptual change. The relational management perspective shifts public relations practice from manipulating public opinion through communication messages to a combination of "symbolic communication messages and organization behaviors to initiate, nurture, and maintain mutually beneficial organization-public relationships" (p. 87).

The Definition of Organizational-Public Relationships (OPR)

The public relations literature emphasizes managing relationships with publics. However, there has been far less research effort to develop theories for relationship building (Broom et al., 2000; J. Grunig & Huang, 2000).

A fundamental shift in relationship research emerged in the late 1990's. Broom et al. (1997) tried to explore the concept of relationships in public relations theory and practice. Even though they found few definitions of such relationships in public relations literature, they suggested a concept of relationships with measurable properties that is distinct from antecedents and consequences and independent of perceptions held by individuals in the relationship. In response to Broom et al.'s

(1997) comment, Bruning and Ledingham (1999) defined OPR as the "state which exists between an organization and its key publics in which the actions of either entity impact the economic, social, political, and/or cultural well-being of the other entity" (p. 160).

Whereas Bruning and Ledingham (1999) defined OPR from the perspective of relationship impacts, Huang (1997) and J. Grunig and Huang (2000) examined OPR from the perspective of relationship characteristics. There are two basic assumptions underlying Huang's (1997) approach in defining OPR: Relationships consist of more than one fundamental feature, and four relational features (trust, satisfaction, commitment, and control mutuality) represent the construct of OPR. Based on both conceptual foundations and empirical data, Huang (1997) defined OPR as "the degree that the organization and its publics trust one another, agree on who has rightful power to influence, experience satisfaction with each other, and commit oneself to one another" (p. 61) – using Canary and Spitzberg's (1989) way of describing relationships in general to describe OPR in particular. In essence, J. Grunig and Huang (2000) and Huang (1997) agreed with Burgoon and Hale's (1984) and Canary and Spitzberg's (1989) assertion that it is important to conceptualize relational characteristics in terms of universal features and that a relationship is composed of more than one relational dimension.

On the other hand, Broom et al. (2000), after examining relationships from the perspectives of interpersonal communication, psychotherapy, inter-organizational relationships, and systems theory, defined organization-public relationships as follows:

Organizational-public relationships are represented by the patterns of interaction, transaction, exchange, and linkage between an organization and its publics. These relationships have properties that are distinct from the identities, attributes, and perceptions of the individuals and social collectivities in the relationships. Though dynamic in nature, organization-public relationships can be described at a single point in time and tracked over time. (p. 18)

The review of definitions of relationships suggests that there still seems to be debate on how OPR should be defined and conceptualized. There is a need for a better, more general, widely accepted definition of OPR. The absence of a fully explicated definition precludes the development of valid operational measures of OPR and limits theory building in public relations. Without such definition, both scholars and practitioners will continue using indirect measures to draw inferences about relationships without measuring the relationships per se. A widely accepted definition of relationship would facilitate and accelerate the development of a sound theoretical basis for measuring relationships.

In this study, I adopted a definition of relationships that was developed by Rhee (2004). In her dissertation on creating synergy among internal and external publics through strategic relationship management, Rhee noted that the definitions suggested by public relations scholars thus far are either too broad or too narrow in scope or sometimes neglect the important component of communication in the relationship-building process. She argued that an OPR develops only after repeated communication takes place between the organization and publics. In an attempt to explore an inclusive notion of an OPR, she posited the following as a definition of an organization-public relationship: "An organization-public relationship can be defined

as a connection or association between an organization and a public that results from behavioral consequences an organization or a public has on the other and that necessitates repeated communicative interaction" (p. 45).

Types of Relationships

Many researchers (J. Grunig & Huang, 2000; Hon & J. Grunig, 1999; Huang, 1997, 2001) participated in developing dimensions of organization-public relationships to build and enhance on-going or long-term relationships with strategic publics. Among those scholars, Hon and J. Grunig (1999) first identified two types of relationships that an organization can have with its publics.

The two types of relationships are exchange and communal relationships (Hon & J. Grunig, 1999). Most of the research on communal and exchange relationships has been developed by psychologists Mills and Clark (1994). The two scholars adopted sociologist Goffman's (1961, as cited in Hung, 2002) concepts of social exchange and economic exchange. Social exchange states that something is returned because the relationship requires it and the intention of social exchange is to stabilize the relationship. In economic exchange, however, favors must be returned of the same value or in equivalent goods. Mills and Clark coined the term "communal relationship," by borrowing the concept of social exchange, to express the concerns that one person has about the welfare of the other party. On the other hand, exchange relationships were derived from economic exchange.

In an *exchange relationship*, "one party gives benefits to the other only because the other provided benefits in the past or is expected to do so in the future" (J. Grunig & Hung, 2002, p. 29). It is the central concept of marketing theory. An exchange relationship, however, is usually not enough for public relations (J. Grunig

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& Hung, 2002). Publics expect organizations to do things for them for which organizations sometimes get little or nothing in return—at least in the short run.

In a *communal relationship,* "both parties are willing to provide benefits to the other because of their concern for the welfare of the other—even when they believed they will get nothing in return" (J. Grunig & Hung, 2002, p. 29). J. Grunig and L. Grunig (1998) pointed out the necessity for public relations practitioners to foster communal relationships with strategic publics. The degree to which a public believes it has a communal relationship with an organization is a critical indicator of the social responsibility of an organization and the success of the public relations management function.

Recently, searching for other possible types of OPR, Hung (2002) identified covenantal, contractual, and exploitive relationships by examining previous studies in the conceptualization chapter of her dissertation. According to Hung, an *exploitive relationship* arises when one takes advantage of the other when the other follows communal norms or one does not fulfill his or her obligation in an exchange relationship (Clark & Mills, 1993). A *covenantal relationship* means both sides commit to a common good by their open exchanges and the norm of reciprocity. This type of relationship was developed by Benette (2001), who posited that educators should foster "covenantal relationships" with students, not "contractual relationships." Individuals in the covenantal relationship always provide others an opportunity to "ask for insight, to provide criticism, and to place a claim upon some of the individual's time" (p. 9). The obligation of the other side is always to listen and provide responses. *Contractual relationships* start when parties agree on what each

should do in the relationship. It is like writing a contract at the beginning of a relationship. Contractual relationships cannot promise equal participation.

In Hung's (2002) qualitative study, participants confirmed that they developed five types of relationships: communal, exchange, covenantal, contractual, and exploitive relationships. In addition, the study identified manipulative and symbiotic relationships as additional types of relationships. *Manipulative relationships* happen when an organization, knowing what publics want, applies asymmetrical or pseudo-symmetrical approaches with the intention to serve its own interests. An organization in a manipulative relationship sometimes uses a win-win situation as a cover, but actually only the organization's interest is served. On the other hand, *symbiotic relationships* develop when organizations, realizing interdependence in the environment, work together with certain publics with the common interest of surviving in the environment. This kind of relationship does not involve any expectation of benefit exchange but the same intention to continue to exist together.

Bruning and Ledingham (1999) also suggested different types of relationships. Based on survey research that used trust, openness, involvement, investment, commitment, reciprocity, mutual legitimacy, and mutual understanding as dimensions of relationships, they found three underlying factors: professional relationship, personal relationship, and community relationship. A *professional relationship* essentially describes the transactional nature of relationships in which both parties are interested in the exchange of resources. The *personal relationship* dimension describes how the participants in the survey evaluated the organization's concern for their interests. The third dimension, *community relationship*, describes the organization's concern for its surrounding communities. Bruning and Ledingham

suggested that instead of an overarching concept of a broad relationship, organizations should design strategies to maximize the benefit experienced by both parties involved in these different types of relationships. Bruning and Ledingham thought this might enhance public relations effectiveness when managing OPR.

It is intriguing to see how other disciplines approach organizational relationships, especially relationships with employees. Human resource (HR) management scholars have approached employee-organization relationships from the employer's perspective. For example, Tsui, Pearce, Porter, and Tripoli (1997) described four approaches to the employee-organization relationship designed to maximize organizational flexibility from the employer's perspective: quasi spot contract, mutual investment, overinvestment, and underinvestment. They explained that they chose to focus on the employer's perspective in their study because "(1) it is where most change has been observed and (2) although some negotiations do occur, it is usually the employer who defines the bulk of the terms or content of employment contracts" (Tsui et al., 1997, p. 1091).

Quasi spot contract is "a pure economic exchange and the exchange is relatively short-term and closed-ended for both parties" (Tsui et al., 1997, p. 1092). *Mutual investment* involves "some degree of open-ended and long-term investment in each other by both the employee and the employer" (Tsui et al., 1997, p. 1093). It includes an extended consideration of the employee's well-being as well as an investment in the employee's career within the firm. I think these two types parallel the types of relationship that public relations scholars use. A mutual-investment relationship is similar to a communal relationship because a willingness to develop and maintain a long-term relationship is a key characteristic of mutual investment. On

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the other hand, a quasi spot contract is close to an exchange relationship because it attempts to create a marketlike flexibility so that the employer is free to hire and fire workers.

Although the above two types of employee-organization relationships reflect balanced exchanges in which the obligations of each party are matched, Tsui et al. (1997) noted that it is possible for two unbalanced approaches to exist. Those unbalanced relationships are overinvestment and underinvestment. Tsui et al. used the term *underinvestment* to describe such "an unbalanced relationship in which the employee is expected to undertake broad and open-ended obligations, while the employer reciprocates with short-term and specified monetary rewards, with no commitment to a long-term relationship" (p. 1093). In a contrasting type of unbalanced employee-organization relationship, the employee performs only a well-specified set of job-focused activities; but the employer offers open-ended and broad-ranging rewards. Tsui et al. used the term *overinvestment* to refer to this second unbalanced employee-organization relationship.

Tsui et al. (1997) showed, through an empirical study of employees from ten companies, that employees performed better on core tasks, demonstrated more citizenship behavior, and expressed a higher level of affective commitment to an employer when they worked in an overinvestment or mutual investment relationship than when they worked in a quasi-spot-contract or underinvestment relationship.

I think the above two types of unbalanced relationships may give fresh insights to public relations researchers. An exchange relationship and a communal relationship, which public relations scholars adopted in many studies, are balanced relationships by definitions. In these two types of relationships, "mutual" (Blau, 1964,

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as cited in Masterson et al., 2000) exchanges of benefits are decided by "both parties" (J. Grunig & Hung, 2002). I think it will be meaningful to consider and explore unbalanced relationships in public relations studies because many organizations "actually are using mixed, or relatively unbalanced approaches" (Tsui et al., 1997, p. 1090).

While sociologists, public relations scholars, and HR researchers have paid a good deal of attention to the types of relationships employees have with their organizations, organizational researchers have approached relationships from a different direction. They have focused on the issue of with whom employees have relationships. Organizational researchers have found that employees have relationships with two different parties in organizations.

According to Masterson et al. (2000), prior research has convincingly established that an employee is involved in at least two social exchange relationships at work: one with his or her immediate supervisor (i.e., Leader-member exchange), and one with his or her organization (i.e., perceived organizational support).

Leader-member exchange (LMX) is defined as the quality of the relationship between a supervisor and an employee (e.g., Graen & Scandura, 1987). As is true for all exchange relationships, "each party in an LMX must offer something the other sees as valuable and each must see the exchange as reasonably equitable and fair" in order to continue it (Graen & Scandura, 1987, p. 182). Two studies have shown that high-quality LMX relationships lead employees to engage in behaviors that are directly related to their supervisor, such as in-role behavior and organizational citizenship behaviors (Settoon, Bennett, & Liden, 1996; Wayne, Shore, & Liden, 1997).

Perceived organizational support (POS) reflects "the quality of the employee-organization relationship by measuring the extent to which employees believe that their organizations value their contributions and care about their welfare" (Eisenberger, Huntington, Hutchison, & Sowa, 1986, p. 501). POS develops through employees' assessment of their treatment by organizations, and they subsequently use their judgments of POS to estimate their effort-outcome expectancy. Thus, to the extent that an organization treats an employee well and values his or her efforts, the employee can be expected to devote greater effort toward helping the organization achieve its goals (Settoon et al., 1996; Wayne et al., 1997).

In this study, the level of focus was POS because public relations deals with collective publics, not individuals. It is intriguing to note that POS theory in organizational research mirrors the concept of communal relationships in public relations research. In both concepts, employees and organizations are willing to provide benefits to the other because they have concern for the welfare of the other. It is not surprising given that the concept of communal relationship stemmed from the concept of a social exchange relationship.

In this dissertation, I adopted the two-type typology, communal and exchange relationships, because it has been used in previous quantitative research. For example, through a study of publics' perception of their relationships with six American organizations, Hon and J. Grunig (1999) showed that the above two types of relationships are a legitimate and useful typology.

Relationship Constructs

Many researchers have put effort into developing relationship constructs. For example, Broom et al. (1997) proposed relationship concepts, antecedents of

relationships, and consequences of relationships. J. Grunig and Huang (2000) further developed a comprehensive theory of OPR by consulting Stafford and Canary's (1991) relationship maintenance strategies, management theories of organizational effectiveness, and Plowman's (1995) conflict resolution strategies. By doing so, they provided methods for evaluating relationships in each stage: relationship antecedents, cultivation strategies, and relationship outcomes. In this conceptualization chapter, I adopt this three-stage model because I think it provides an effective framework for understanding the various aspects of OPR.

Antecedents of Relationships

Research on antecedents is imperative in relationship management studies. What makes relationships? For what reasons do organizations come to have relationships with publics? What affects the types of relationships and outcomes organizations have with their publics? These are questions of substantial importance to understand the nature of organizational relationships.

Even though the importance of the antecedents of relationships has been recognized among public relations scholars, little empirical research has been done. Also, there has been little research to examine their nature and functions from the employee relations perspective.

In the conceptual level, it was possible to locate ground-breaking studies on relationship antecedents. It was Broom and his colleagues (1997) who first positioned antecedents in the organizational relationship model. Broom et al. reported the results of a graduate research seminar that was dedicated to reviewing the literature of relationships from the fields of interpersonal communication, psychotherapy, interorganizational relationships, and systems theory. They developed a three-stage

model that consisted of relationship concepts, antecedents to relationships, and consequences of relationships.

Broom et al.'s (1997) antecedents of relationships explained reasons why organizations enter into relationships with specific publics. Broom et al. (2000) noted that; "Antecedents to relationships include the perceptions, motives, needs, behaviors, and so forth, posited as contingencies or as causes in the formation of relationships" (p. 16). They also explained that "sources of change, pressure, or intention on the system derived from the environment" (p. 16) give rise to relationships.

On the other hand, Broom et al. (1997) noted that dominant theories for studying the antecedents to relationships were derived from resource dependency theory and exchange theory. They explained that resource dependency theory stipulates that relationships form in response to an organization's need for resources. According to them, satisfying the need for resources allows an organization to survive, to grow, and to achieve other goals. Similarly, exchange theory suggests that voluntary transactions result from knowledge of domain similarity and lead to mutual benefit and mutual goal achievement. Thus, exchange theorists define relationships "in terms of voluntary transactions and the mutuality of interests and rewards" (Broom et al., 1997, p. 91).

While Broom et al.'s (1997) antecedents of relationships explained reasons why organizations enter into relationships with specific publics, J. Grunig and Huang (2000) focused on situational aspects of organizations. They noted that change pressure from the environment may have little to do with resources or with exchanges. Relationships depend on specific situations and behavioral consequences on specific publics, J. Grunig and Huang argued. Therefore, antecedents of relationships are

situational. For them, antecedents "describe the publics with which organizations need relationships" (p. 29).

J. Grunig and Hunt (1984) theorized that organizations have public relations problems (reasons to develop relationships with publics) "when management decisions have consequences on nonmanagement people inside or outside of the organization (publics) or when the behavior of these publics has consequences on the success with which the decision can be implemented" (J. Grunig & Huang, 2000, p. 33). J. Grunig and Huang noted that consequences of multiple publics and organizations on each other could be situational antecedents of relationships. They suggested use of environmental scanning to identify strategic publics with which organizations need to build relationships.

The above studies are significant in relationship research. However, I believe that more studies need to be done to fully understand what the antecedents of relationships are. In my opinion, the definitions of antecedents suggested by public relations scholars thus far are either too broad or too vague to be used for employee-organization relationships. I believe closer investigation on more concrete antecedents is necessary.

I searched in *The American Heritage College Dictionary* for the meaning of an antecedent. According to the dictionary, an antecedent means "one that precedes another", or "a preceding occurrence, cause, or event" (p. 56). For me, the definition of "a preceding cause" makes the most sense for relationship research. It also addresses the question I raised at the beginning of this section: "What makes relationships?" Thus, I define *employee relationship antecedents* for my study as "causes or reasons why employees have specific relationships with organizations".

And I chose organizational structure and internal communication as two possible antecedents because I thought these two factors constrain people's perceptions, attitudes and behaviors inside organizations. I argue these are the factors that are most likely to influence relationships that employees have with their organizations in the organizational level.

Relationship Cultivation Strategies

Relationship cultivation strategies are the strategies used to maintain relationships with publics (J. Grunig & Huang, 2000). Scholars in interpersonal relationships (e.g., Canary & Stafford, 1994; Canary & Stafford, 1997; Dindia & Canary, 1993) have used the term "relationship maintenance" to illustrate how parties in a relationship behave to keep a desirable relationship. Canary and Stafford (1994) pointed out that maintenance is a goal for people in relationships because people expect "long-term, stable, and satisfying relationships" (p. 4). Hence, maintenance is considered a process, involving all the dynamics.

J. Grunig and Huang (2000) were among the first to develop maintenance strategies for relationships in public relations. They drew maintenance strategies from the theory of public relations models, interpersonal communication theories, and conflict resolution theories. Most recently, J. Grunig (2002) renamed the maintenance strategies as cultivation strategies. He defined cultivation strategies as "methods that public relations people use to develop new relationships with publics and to deal with the stresses and conflicts that occur in all relationships" (p. 5). I agree that behaviors in relationships are a cultivating process; thus, I will use the term relationship cultivation strategies in place of relationship maintenance strategies.

According to Hon and J. Grunig (1999), public relations professionals have accumulated various strategies for the cultivation of relationships with publics. Hon and J. Grunig proposed a selective set of most effective strategies that are likely to produce relationship outcomes. They noted that concepts from research on interpersonal relationships could be applied to maintaining symmetrical public relationships:

1. Access – Members of publics or opinion leaders provide access to public relations people. Public relations representatives or senior managers provide representatives of publics similar access to organizational decision-making processes. Either party will answer telephone calls or read letters or e-mail messages from the other. Either party is willing to go to the other when they have complaints or queries, rather than taking negative reactions to third parties.

2. Positivity – Anything the organization or public does to make the relationship more enjoyable for the parties involved, such as acting joyfully, being polite in conversation, and avoiding criticism of the other side.

3. Openness – The willingness to engage in direct discussions about the nature of relationships.

4. Assurances – Attempts by parties in the relationship to assure that other parties that they and their concerns are legitimate. This strategy also might involve attempts by the parties in the relationship to demonstrate they are committed to maintaining the relationship.

5. Networking – The effort organizations exert in order to build networks or coalitions with the same groups as their publics, such as environmentalists, unions, or community groups.

6. Sharing of tasks – Organizations and publics do their fair share to solve problems of concern to the other. Examples of such tasks are managing community issues, providing employment, making a profit, and staying in business, which are in the interest of either the organization, the public, or both. (Hon & J. Grunig, 1999, pp. 14-15)

From the conflict management theories, three categories of strategies were adopted.

1. Integrative – These approaches are symmetrical because all parties in a relationship benefit by searching out common or complementary interest and solving problems together through open discussion and joint decision-making. The goal is a win-win solution that values the integrity of a long-term relationship between an organization and its publics.

2. Distributive – These strategies are asymmetrical because one party benefits at the expense of another by seeking to maximize gains and minimize losses within a win-lose or self-gain perspective. Tactics include trying to control through domination, argument, insistence on a position, or showing anger. Other forcing strategies are faulting the other party, hostile questioning, presumptive attribution, demands, or threats. Distributive strategies impose one's position onto that of the other party without concern for his or her welfare.

3. Dual Concern – These strategies are relevant for public relations practices, inasmuch as they take into consideration the role of balancing the interests of publics with the interests of the organization. These strategies can also be called mixed-motive or collaborative advocacy. (Hon & J. Grunig, 1999, p. 16)

Some dual concern strategies are asymmetrical because they emphasize the organization's interest over the public or vice versa and will not be effective in developing and maintaining the most positive relationships over the long term. These strategies include:

a. Contending. The organization tries to convince the public to accept its position.

b. Avoiding. The organization leaves the conflict either physically or psychologically.

c. Accommodating. The organization yields, at least in part, on its position and lowers its aspiration.

d. Compromising. The organization meets the public part way between its preferred positions, but neither is completely satisfied with the outcome. (Hon & J. Grunig, 1999, pp. 16-17)

Symmetrical strategies include the following:

a. Cooperation. Both the organization and the public work together to reconcile their interests and to reach a mutually beneficial relationship.

b. Being unconditionally constructive. The organization does whatever it thinks is best for the relationship, even if it means giving up some of its positions and even if the public does not reciprocate.

c. Saying win-win or no deal. If the organization and public cannot find a solution that benefits both, they agree to disagree – no deal. A strategy of no deal is symmetrical because it leaves open the potential to reach a win-win solution at a later date. (Hon & J. Grunig, 1999, p. 17)

Relationship Outcomes

Huang (1997) first introduced the concept of relational outcomes into public relations theory. By developing a theory integrating public relations strategies (models of public relations), conflict resolution strategies, and relationship outcomes, Huang identified indicators for evaluating relationships from the work of Stafford and Canary (1991): control mutuality, trust, commitment, and satisfaction. J. Grunig and Huang (2000) outlined the four relational outcomes as follow:

1. *Control mutuality*—the degree to which the parties in a relationship are satisfied with the amount of control they have over the relationship.

2. *Trust*—the level of confidence that both parties have in each other and their willingness to open themselves to the other party. Trust has several underlying dimensions. (Hon & J. Grunig, 1999; J. Grunig & Huang, 2000). One of these is *integrity*, the belief that an organization is fair and just. A second is *dependability*, the belief that an organization will do what it says it will do. A third is *competence*, the belief that an organization has the ability to do what it says it will do.

3. *Commitment*—the extent to which both parties believe and feel that the relationship is worth spending energy on to maintain and promote.

4. *Satisfaction*—the extent to which both parties feel favorably about each other.

According to J. Gruing and Huang (2000), organization-public relationships are successful "to the degree that the organization and publics trust one another, agree on who has rightful power to influence, experience satisfaction with each other, and commit oneself to one another" (pp. 42-43). This study employed the above four outcomes to measure relationships.

<div align="center">Organizational Structure and Internal Communication

as Antecedents of Relationships</div>

Two particular components of organizational properties are pertinent antecedents of organizational relationships in this study: organizational structure and internal communication. I chose these two constructs as antecedents because this study primarily explored an internal relational aspect of organizations. Also, as mentioned before, I thought these are the factors that constrain people's perceptions, attitudes, and behaviors inside organizations.

Holtzhausen (2002) noted that managing internal publics is one of the major responsibilities of public relations managers. By focusing on internal relationships, this study delved into organizational factors that most influence employee-organization relationships.

Among many factors, I believe organizational structure and internal communication are the strongest antecedents of employee-organization relationships. Organizational structure seems to be a strong indicator of employees' roles and behaviors in organizations. For example, excellent organizations have certain structures "that empower employees and allow them to participate in decision making" (L. Grunig et al., 2002, p. 484). On the other hand, according to L. Grunig et al., symmetrical systems of internal communication typically increase the likelihood

that employees will be satisfied with their individual jobs and with the organization as a whole. Also, internal communication is one of the most important specialties of public relations (L. Grunig et al., 2002) and one of public relations' contributions to organizational effectiveness (J. Grunig, 1992c).

Moreover, these two factors are closely related to each other. An organization with a decentralized, less formalized, less stratified, and more complex structure promotes extensive and open communication (L. Grunig et al., 2002).

After a spate of interest during the 1970s and 1980s (Holtzhausen, 2002), interest in the impact of organizational structure and internal communication on public relations has virtually come to a standstill in public relations research. As a result, my choice of main dimensions of two antecedents heavily depended on the *Excellence theory* (J. Grunig, 1992c; L. Grunig et al., 2002), which comprehensively explored these two factors.

Organizational Structure

Organizational structure is the way responsibility and power are allocated, and work procedures are carried out, among organizational members (Blau, 1970; Dewar & Werbel, 1979; Germain, 1996; Gerwin & Kolodny, 1992). Robbins (1990) echoed the above definition by saying that organizational structure determines task allocation, reporting lines, and formal coordination mechanisms and interaction patterns. On the other hand, Goldhaber, Dennis, Richetto, and Wiio (1984) defined organizational structure as "the network of relationships and roles existing throughout the organization" (p. 44).

The biggest question in research on organizational structure is what is the best form of organization and why (L. Grunig et al., 2002). As asked by Weber (1947, as

cited in L. Grunig et al., 2002) more than 50 years ago, it is meaningful to consider the influencing factors that contribute toward shaping organizational structure. Organizations shape patterns of structure for three main reasons, according to Robbins (1990). First, he said that the natural selection model holds that the environment lends itself to only a few organizational forms. Second, organizations search for internal consistency – structural characteristics that work well together to be in equilibrium with their environment. And third, the number of viable configurations are limited to what is in vogue because managers are prone to follow what is trendy, be it participatory management, bureaucracy, or matrix management.

Identifying technology as another influencing factor, Hall (1977) succinctly stated: "Not only is structure affected by the technology employed, but the success or effectiveness of the organization is related to the 'fit' between technology and structure" (p. 120). Recently, Miller (1999) reiterated that advancement in technology was indeed having its effects on organizational structure. With technologies allowing communication at great distances and at asynchronous times, it is no longer necessary for people working together to work from the same place. Miller put forth four variations of work distribution based on time and place of work: 1) central office (work accomplished by people in the same time at the same place), 2) telecommuting (work accomplished at the same time but in different place), 3) flextime (work done at the same place at different times), and 4) virtual offices (work done at different times at different places using multiple information and computer technologies). These modern concepts further open new avenues for organizational structures.

Dimensions of Organizational Structure

Most research on organizational structure is found in organizational studies

and innovation studies. And most of the research has noted that organizational structure has multiple dimensions. One classic depiction of organizational structure is the organic versus mechanical dichotomy. A great deal of organizational theory literature suggests that the nature of organizational structure can be distinguished as mechanistic (inorganic) versus organic (Daft, 2003; Lawrence & Lorsch, 1967, as cited in Nahm, Vonderembse, Koufteros, 2003; Nemetz & Fry, 1988; Zammuto & O'Connor, 1992).

Daft (2003) stated, "significant changes are occurring in organizations in response to changes in the society at large" (p. 11). He said that the *mechanistic* paradigm is effective when environments have a high degree of certainty, technologies tend to be routine, organizations are large-scale, and employees are treated as another resource. Internal structures tend to be vertical, functional, and bureaucratic. The organization uses rational analysis and is guided by parochial values reflected in the vertical hierarchy and superior-subordinate power distinctions.

The *organic* paradigm recognizes the unstable, even chaotic nature of the external environment. Technologies are typically non-routine, and size is less important. Organizations are based more on teamwork, face-to-face interactions, learning, and innovation. Qualities traditionally considered egalitarian such as equality, empowerment, horizontal relationships, and consensus building become more important (Daft, 2003).

While organizational theorists distinguished organizational structure as mechanical versus organic, innovation scholars noted that structure can be divided into *industrial* versus *post-industrial* modes of operations. According to innovation scholars, as organizations shift from an industrial to a post-industrial mode of

operations, they need a structure that has (Koufteros & Vonderembse, 1998):

> (1) rules and regulations that encourage creative, autonomous work and
> learning; (2) few layers in the organizational hierarchy to enable quick
> response; (3) a high level of horizontal integration to increase knowledge
> transfer; (4) decentralized decision-making so operating issues can be dealt
> with effectively and quickly; and (5) a high level of vertical and horizontal
> communication to ensure coordinated action. (p. 22)

Organizational structure is partly affected by the organization's external environment (Nahm et al., 2003). Research suggests that firms organized to deal with reliable and stable markets may not be as effective in a complex, rapidly changing environments (Gordon & Narayanan, 1984; Spekman & Stern, 1979). The more certain the environment, the more likely the firm's organizational structure may have a centralized hierarchy, with formalized rules and procedures (Lawrence & Lorsch, 1967, as cited in Nahm et al., 2003). Organizations that operate with a high degree of environmental uncertainty may decentralize decision-making (Ruekert, Walker Jr., & Roering, 1985), rely less on formal rules and policies (Jaworski, 1988), and flatten their hierarchies (Walton, 1985).

Damanpour (1991) provided a thorough list of structural characteristics through an extensive review of the organizational literature. He documented that researchers have used specialization, functional differentiation, professionalism, formalization, centralization, managerial attitude toward change, managerial tenure, technological knowledge resources, administrative intensity, external communication, internal communication, and vertical differentiation, in their probe into organizational determinants.

Daft (2003) provided a list that includes formalization, specialization, standardization, hierarchy of authority, complexity, centralization, professionalism, and personnel ratios. Germain (1996) focused on specialization, decentralization, and integration in describing the role of context and structure in adopting logistical innovations. Paswan, Dant, and Lumpkin (1998) used formalization, centralization, and participation in explaining linkages between environmental uncertainty and bureaucratization in distribution channels.

Among these varied sub-dimensions of organizational structure, the four most commonly discussed are described in more detail: nature of formalization, layers of hierarchy, level of horizontal integration, and centralization of authority (locus of decision-making) (Damanpour, 1988, 1991; Germain, Droge, & Daugherty, 1994; Gerwin & Kolodny, 1992; Ruekert et al., 1985; Swamidass & Newell, 1987; Walton; 1985).

1. Nature of formalization. The nature of formalization is the degree to which employees are provided with rules and procedures that deprive versus encourage creative, autonomous work and learning. The organization theory literature divides formalization as high versus low, where a high level of formalization is related to a mechanistic structure and a low level of formalization is related to an organic structure (Nahm et al., 2003). The innovation literature assumes that a high degree of formalization has a negative relationship with innovation, while flexible work rules facilitate innovation (Damanpour, 1991).

2. Number of layers in hierarchy. The number of layers is the degree to which an organization has many versus few levels of management (Walton, 1985).

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Burns and Stalker (1961, as cited in Walton, 1985) and Walton (1985) stated that organic organizations have few layers in their hierarchy. The innovation literature generally assumes that hierarchical levels increase links in communication channels, making communication between levels more difficult and inhibiting the flow of innovative ideas (Damanpour, 1991; Hull & Hage, 1982).

3. Level of horizontal integration. The level of horizontal integration is the degree to which departments and employees are functionally specialized (i.e., low level of horizontal integration) versus integrated in their work, skills, and training (i.e., high level of horizontal integration) (Davenport & Nohria, 1994; Doll & Vonderembse, 1991; Gerwin & Kolodny, 1992; Vonderemse, Ragunathan, & Rao, 1997, Walton, 1985). In accordance with the spirit of division of labor, organizations usually separate functional departments so work may be carried out in a sequential manner (Davenport & Nohria, 1994). In order to respond to the changing environment and to provide value to customers, employees in postmodern organizations are being brought together in autonomous work teams, cross-functional teams, and task forces. Employees are usually cross-trained so they understand the entire process better and are responsive to the changing needs of customers (MacDuffie, 1995; Vonderembse et al., 1997). As a result, organic organizations have high levels of horizontal integration (Davenport & Nohria, 1994; Gerwin & Kolodny, 1992).

4. Locus of decision-making. The locus of decision-making is the degree to which decisions are made higher versus lower in the organizational hierarchy

(Daft, 2003; Doll and Vonderembse, 1991; Germain, 1996; Germain et al., 1994; Paswan et al., 1998; Ruekert et al., 1985; Swamidass & Newell, 1987; Walton, 1985). Walton (1985) stated that organizations operating under the control model of management emphasize management prerogatives and positional authority and allocate status symbols to reinforce the hierarchy. Organizations operating in an uncertain environment should delegate decisions to the level where workers may quickly adjust to the changing situations and provide value to their customers (Doll & Vonderembse, 1991).

Public Relations Perspective on Structure

J. Grunig (1976) noted, a quarter century ago, that "the role and behavior of public relations practitioners are influenced by organizational structure" (L. Grunig et al., 2002, p. 484). J. Grunig and Hunt (1984) also held that structural variables help predict the model of public relations practiced. J. Grunig (1992c) identified structural variables that significantly affect communication within an organization.

Despite the pervasiveness of the theory of structure in organization studies, only a handful of studies on structure have been conducted in public relations. L. Grunig (1985) did an analysis of organizational data to determine the relationship between four organizational types, as defined by Hage (1980), and the role of public relations. Structural findings of this research relate to a negative tendency in large-scale organizations to centralize public relations clearance and policy. This, however, depended on the power and authority of the public relations function.

J. Grunig (1992c) proposed that rigid organizations would try to control their environment, particularly through the use of persuasion techniques, press agentry, and two-way asymmetrical public relations. Relatively organic organizations would try to

adapt and would be more likely to use the two-way symmetrical approach. One can therefore assume that decentralized organizations, with less emphasis on hierarchical structure, will be more likely to adopt two-way symmetrical communication practices.

In the above study, J. Grunig (1992c) used Hage's (1980) four dimensions of organizational structure – centralization, stratification, formalization, and complexity – to conceptualize organizational structure and its effect on organizational communication. *Centralization* describes the extent to which decision making is concentrated at the top of the organizational hierarchy. Hage hypothesized that centralization inhibits communication in organizations, whereas decentralization encourages the dispersion of information and decision making in an organization. *Stratification* represents the extent to which an organization makes clear who are its higher level employees and who are its lower level employees. Low levels of communication are associated with stratification. *Formalization* is the extent to which an organization follows written rules and regulations. A pervasiveness of rules and regulations discourages both innovation and communication. Hage noted that communication helps an organization coordinate its members, whereas formalization controls them. *Complexity*, the fourth variable, represents the extent to which an organization has educated, professionalized employees who fill specialist roles. Upward communication, rather than a downward flow of communication, correlates with complexity far more than with the other three structural variables.

In this study, I adopted Hage's (1980) four structural variables because they have been shown to provide a reliable way to study organizational behavior (L. Grunig, 1992). Also, organizational sociologists have found that Hage's variables have the greatest effect on job satisfaction and communication (J. Grunig, 1992c),

which are important variables in this study.

I added one more variable to the construct of organizational structure: *participation in decision making.* J. Grunig (1992c) incorporated the above fifth structural variable, which often has appeared in audits of employee communication and in psychological theories of leadership. Although scholars of organizational communication generally consider participation in decision making to be a communication variable, J. Grunig claimed it is a structural variable because "participation strategies – such as participative management, quality circles, teams, or delegation of responsibility – increase the autonomy of individuals and reduce their constraints" (p. 561). Excellent organizations have management structures that empower employees and allow them to participate in decision making.

The importance of participation in decision making also has been recognized by organizational scholars. Participatory management practices attempt to diminish the hierarchical structure of the organization in order to involve employees in information processing, decision making, or problem solving endeavor (Wagner, 1994). According to Heller, Drenth, Koopman, and Rus (1988), increased participation in decision making by lower-level members of the organization has been found to have a positive effect on the efficiency of the decision-making process. Research has shown that employees who participate in decisions involving them have higher levels of organizational commitment (Boshoff & Mels, 1995). In an extensive review of the effect of participation on performance, Wagner concluded that participation could have a statistically significant effect on both performance and satisfaction.

Burns and Stalker (1961, as cited in Wagner, 1994) studied the relationship

between organizational types and organizational structural variables. Burns and Stalker noted that mechanical organizations were more centralized, formalized, and stratified and less complex; and they did not allow employee participation in decision-making. Conversely, organic organizations were decentralized, less formalized, and less stratified and more complex; and they encouraged employee participation in decision-making. Furthermore, increased communication (horizontal, upward, and crisscross directions) took place more frequently in organic than in mechanical organizations.

Based on the literature review on organizational structure, in this study, I adopted Hage's (1980) four dimensions of organizational structure (centralization, stratification, formalization, and complexity) and J. Grunig's (1992c) fifth structural variable (participation in decision making). Thus, the construct of organizational structure of this study was composed of five variables. Then, I combined these five variables into two general types of organizational structure, following J. Grunig (1992c). Organizations with *mechanical structures* are centralized, formalized, and stratified and less complex and do not allow employees to participate in decision making. Organizations with *organic structures* are less centralized, less formalized, less stratified, and more complex and facilitate participation in decision making.

Internal Communication

Internal communication is a "specialized sub-discipline of communication that examines how people communicate in organizations and the nature of effective communication systems in organizations" (L. Grunig et al., 2002, p. 486). In this overview of internal communication, I, first, track the history of research and examine the definitions of internal communication. Then, I examine the sub-dimensions of

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internal communication.

History and Definitions of Internal Communication

Putnam, Phillips, and Chapman (1996) conducted a significant study on the history and chronology of internal communication. According to them, the early work in internal communication was shaped by interests in business and industrial communication from the 1920s to the 1950s and the human relations movement from the 1950s to the mid 1970s. The writings of Dale Carnegie and texts on business rhetoric focused on the persuasive strategies of top management, the accuracy and readability of reports, and the effectiveness of different communication media (Putnam & Cheney, 1985; Redding, 1985).

In the 1960s and 1970s, the dominant standpoint shifted to the study of messages that flowed through organizations and the way communication climates influenced the adequacy and effectiveness of these transmissions. This period witnessed two dominant interests: (1) the skills that made individuals more effective communicators on the job and (2) the factors that characterized system-wide communication effectiveness (Redding & Tompkins, 1988). In this period, called the *modernist orientation*, internal communication subsumed psychological studies that focused on such topics as superior-subordinate interaction, communication climate, and information processing, as well as sociological studies that centered on communication networks, work group coordination, and adoption and use of new communication technologies (Putnam et al., 1996).

The early 1980s marked a radical shift in internal communication scholarship. Scholars challenged the research traditions in internal communication, particularly the absence of theoretical frameworks and the nature of organizational reality embedded

in modernist work (Putnam & Cheney, 1985; Redding & Tompkins, 1988). Nested within these critiques were challenges to the treatment of communication as a linear transmission (Putnam, 1983). New research domains began to focus on the meanings of organizational events, strategic ambiguity, language symbols and organizational culture, organizational identification and unobtrusive control, communication rules and scripts, corporate public discourse, and the exercise of power and control through distorted communication (Putnam et al., 1996).

Another important review of the history of communication inside organizations came from Dover (1964, as cited in J. Grunig, 1992c). In his chapter on internal communication in the first *Excellence* book, J. Grunig (1992c) cited Dover's article on three eras of employee communication:

> Dover's (1964) era of "entertaining employees" prevailed in the 1940s, his era of "informing employees" prevailed in the 1950s and his era of "persuading employees" prevailed in the 1960s. J. Grunig and Hunt (1984) equated the first three eras to the press agentry, public information, and two-way asymmetrical models of public relations. J. Grunig and Hunt added that a new era of open (symmetrical) communication developed in employee communication in the 1970s and 1980s. (p. 535)

There are a number of definitions and conceptualizations of the domain of internal communication. For example, Katz and Kahn (1966) viewed internal communication as the flow of information (the exchange of information and the transmission of meaning) within an organization. Using the general systems model developed for the physical sciences by von Bertalanffy (1956, 1962, as cited in Katz and Kahn, 1966) and others, Katz and Kahn defined organizations as open systems

and discussed such properties as the importing of energy from the environment, the transformation of this energy into some product or service released into the environment, and the reenergizing of the system from energy sources found once again in the environment.

After reviewing the literature of 50 "internal communication" experts, each with their own perception of the domain of the field, Goldhaber (1999) found that definitions, approaches to, and conceptions of internal communication were legion. It was apparent that internal communication could mean and refer to whatever the author wanted. However, Goldhaber commented that a few common strands could be detected in many of the 50 conceptions despite the wide variety of viewpoints:

1. Internal communication occurs within a complex open system that is influenced by and influences its environment.

2. Internal communication involves messages – their flow, purpose, direction, and media.

3. Internal communication involves people – their attitudes, feelings, relationships, and skills.

Goldhaber's (1999) propositions led to his definition of internal communication: the flow of messages within a network of interdependent relationships. This conception of the field of internal communication includes four key concepts: messages, networks, interdependence, and relationships.

Besides the definition of internal communication, there are many other aspects that confuse internal communication researchers. One of them is the term used to name internal communication. Researchers use several terms at the same time: for example, organizational communication, internal communication, and employee

communication. In this study, I used the term *internal communication* rather than *employee communication or organizational communication*, following Holtzhausen's argument (2002). She argued that internal communication seems more inclusive and symmetrical than organizational communication or employee communication.

Dimensions of Internal Communication

Like organizational structure, internal communication is also a multidimensional construct. Employees are not merely satisfied or dissatisfied with communication in general, but they can express varying degrees of satisfaction about aspects of communication (Clampitt & Downs, 1993).

Of the many possible distinctions between types of internal communications that can be made, the most popular one is a distinction between horizontal and vertical communication (Postmes, Tanis, & de Wit, 2001). *Horizontal* communication refers to the informal interpersonal and socio-emotional interaction with proximate colleagues and others in the organization who are at the same level. In contrast, *vertical* communication refers to work-related communications up and down the organizational hierarchy and may range from employees receiving information about the organization's strategy to the ability for giving bottom-up feedback and advice to management.

Downs, Hazen, Quiggens, and Medley's (1973, as cited in Clampitt & Downs, 1993) used the results of factor analysis to hypothesize eight stable dimensions of internal communication, which have been considered the best measures of communication satisfaction in the organizational arena:

1. *Communication climate.* Communication climate reflects communication on both the organizational and personal level. On the one hand, measures of

climate include items such as the extent to which communication in the organization motivates and stimulates employees to meet organizational goals and the extent to which it makes them identify with the organization. On the other hand, climate also includes estimates of whether people's attitudes toward communication are healthy in the organization.

2. Supervisory communication. Supervisory communication includes both upward and downward aspects of communicating with superiors. Three of the principal items used to measure supervisory communication include the extent to which a superior is open to ideas, the extent to which the supervisor listens and pays attention, and the extent to which guidance is offered in solving job-related problems.

3. Organizational integration. Organizational integration revolves around the degree to which individuals receive information about the immediate work environment. Items measuring the concept include the degree of satisfaction with information about departmental plans, the requirements of their jobs, and some personnel news.

4. Media quality. Media quality deals with the extent to which meetings are well organized, written directives are short and clear, and the amount of communication is about right.

5. Coworker communication. Coworker communication concerns the extent to which horizontal and informal communication is accurate and free flowing. This factor also includes satisfaction with the activeness of the grapevine.

6. Corporate information. Corporate information deals with broadest kind of information about the organization as a whole. It includes items on notification

about changes, information about the organization's financial standing, and information about the overall policies and goals of the organization.

7. Personal feedback. Personal feedback is concerned with the workers' need to know how they are being judged and how their performance is being appraised.

8. Subordinate communication. Subordinate communication focuses on upward and downward communication with subordinates. Items include subordinate responsiveness to downward communication and the extent to which subordinates initiate upward communication.

Pincus (1984, 1986) revised the Downs et al. (1973) instrument into three dimensions of communication satisfaction: relational dimensions (subordinate communication, coworker communication, and top management communication), information/ relational dimensions (personal feedback, communication climate, and supervisor communication), and informational dimensions (media quality, organizational integration, and corporate information). Pincus' major addition to the instrument was *top management communication* – the extent to which top management communicates openly with employees.

According to J. Grunig (1992c), many internal communication researchers, especially the early ones, "referred to communication in a general sense – as though communication is always the same" (p. 551). When they operationalized communication for an actual study, however, the researchers developed several concepts of what communication is. The most popular concepts have been communication climate; satisfaction with communication; perceptions of the amount, sources, and flows of communication; and the amount and type of supervisor-

subordinate communication (J. Grunig, 1992c, p. 551), which are very similar to Downs et al.'s (1973) dimensions of internal communication.

The most recent major review and compilation of internal communication research and theory were done by Putnam et al. (1996). They identified internal communication perspectives in the form of metaphor clusters. Each of the seven metaphor clusters they identified – conduit, lens, linkage, performance, symbol, voice, and discourse – can be considered a screen/ perspective, and as such "researchers can examine any organizational topic from one of these clusters" (p. 394). However, it also reflects key elements of internal communication phenomena (Tompkins & Wanca-Thibault, 2001) because each metaphor varies in complexity and completeness with respect to the study of internal communication.

1. *Conduit.* The most common view of communication is a conduit in which messages are transmitted throughout the organization. Within the conduit metaphor, communication is treated as a transmission process. The main focus of this metaphor is communication as a tool, channel, or medium for transmitting messages primarily for achieving organizational goals. The image of communication as a tool is widespread in the literature that focuses on communication as an instrument for organizational effectiveness.

2. *Lens.* In this metaphor, communication is equated with a filtering process: searching, retrieving, and routing information. The organization within this metaphor "is an eye that scans, sifts, and relays" (Putnam et al., 1996, p. 380). Although this metaphor also treated communication as a transmission process, there is greater focus on the perception of receivers.

This metaphor also pays attention to the scanning and interpretation of the organizational environment and how this environmental information can be used to influence stakeholders.

3. *Linkage.* Connection, rather than transmission, is the focus of this metaphor. Within this metaphor, organizations are conceptualized as networks of relationships and communication is the connector linking people together. Communication is regarded as a sense-making activity formed through relationships. This metaphor enables the researcher to get beyond the notion of organizations as vehicles of instrumental rationality, focusing instead on the multiple voices and relationships that exist among organizational members.

4. *Performance.* A major factor that distinguishes the conduit, lens, and linkage metaphors from the next four perspectives is an emphasis on interaction and meaning. In the performance metaphor, social interaction becomes the focal point for internal communication research. Performance refers to process and activity, rather than to an organization's productivity or output. Communication becomes part of an ongoing series of cues, without a clear beginning and ending. In the performance metaphor, organizations emerge as coordinated actions, that is, organizations enact their own rules, structures, and environments through social interaction. Putnam et al. (1996) noted that there are three schools that form different approaches to the metaphor of performance: enactment, co-production, and storytelling.

5. *Symbol.* In this metaphor, communication functions as the creation,

maintenance, and transformation of meaning. The meaning of a symbol is typically rooted in cultural significance, for example, an emblem that represents the values and history of a nation. In this metaphor, communication is interpretation through the production of symbols that make the world meaningful. Communication becomes a process of representation. Researchers who embrace this perspective emphasize the complex meanings that members construct rather than the formal and rational aspects of an organization. Thus, an organization is regarded as a text that is produced by symbols; and organizational members interpret the text in understanding their everyday lives.

6. *Voice*. Understanding this metaphor entails focusing on communication as the expression or suppression of the voices of organizational members. This metaphor focuses "our attention on the ability of members to make their experiences heard and understood; on the existence of an appropriate language of expression; on the availability of occasions to speak; on the willingness of others to listen; and on the values, structures, and practices that suppress voice" (Putnam et al., 1996, p. 389). Within the voice metaphor there is a concern with power and control in communication; and this phenomenon is studied from the perspectives of rhetorical theory, critical theory, and feminist theory. Putnam et al. clustered the metaphor of voice into the subcategories of (1) distorted voices, (2) voices of domination, (3) different voices, and (4) access to voice.

7. *Discourse*. One major critique of the voice metaphor is its failure to account for the micro processes that contribute to the origin and

development of organizational arrangements. The performance metaphor

centers on these dynamic, ongoing processes, but fails to demonstrate how

organizations emerge as institutional forms. The discourse metaphor

provides alternatives that address the weaknesses in both the performance

and the voice metaphors. Discourse refers to language, grammars, and

discursive acts that form the foundation of both performance and voice. In

the discourse metaphor, communication is a conversation in that "it

focuses on both process and structure, on collective action as joint

accomplishment, on dialogue among partners, on features of the context,

an on micro and macro processes" (Putnam et al., 1996, p. 391). Research

within the discourse can be categorized into the arenas of (1) discourse as

artifacts, (2) discourse as structure and process, and (3) discourse as

discursive acts.

While communication scholars have paid a lot of attention to the dimensions

of internal communication, public relations researchers have focused on the roles of

two types of communication in public relations activities: symmetrical

communication and asymmetrical communication.

Public Relations Perspective on Internal Communication

J. Grunig (1992c) reviewed a number of studies designed to develop

instruments to audit the effectiveness of organizational communication. He concluded

that these audits suggest the presence of *symmetrical communication.* Symmetrical

communication takes place through dialogue, negotiation, listening, and conflict

management rather than through persuasion, manipulation, and the giving of orders.

Asymmetrical communication in organizations, in contrast, is generally top-

down. It is designed to control the behavior of employees in ways that management desires. Such a system is typical in a mechanical type of organization with an authoritarian culture. Asymmetrical communication remains popular among members of dominant coalitions who strive to increase their power and to control others, rather than to empower employees throughout the organization. In this study I adopted J. Grunig's (1992c) two-type typology of internal communication because of its recognized significance in public relations research.

According to Holtzhausen (2002), it is clear that the traditional media-driven technical approach to internal communication is inadequate in assisting management to bring about the changes demanded by market conditions at the beginning of the 21st century. J. Grunig and Hunt (1984) described this technical role as providing communication and journalistic skills and not participating in the making of organizational decisions. It is now generally accepted that face-to-face or two-way symmetrical communication, with its emphasis on relationship building, is the best model for internal communication and for building morale and job satisfaction in organizations.

The importance of communication in organizational functioning is historically well recognized. However, a noticeable need still exists to examine internal communication measures as they relate to other organizational concepts. This study tried to provide insights to internal communication research by exploring three organizational concepts that are of interest to public relations practitioners and researchers: organizational structure, organizational relationships, and organizational justice.

Organizational Structure and Internal Communication

According to Hall (1987), "The very establishment of an organizational structure is a sign that communications are supposed to follow a particular path" (p. 176). Robbins (1990) mirrored this notion by commenting that a structure governs "who reported to whom, and the formal coordinating mechanisms and interaction patterns" that should be followed (p. 4). Prior research has shown that the formal organizational structure affects internal communication (Galbraith, 1973; Thompson, 1967, as cited in Lau et al., 2003).

However, scholars in the rhetorical/hermeneutic tradition in speech communication disagreed with the notion that communication is a product of or is constrained by organizational structure (J. Grunig, 1992c). For example, Tompkins (1987) argued that without communication there would be no organization.

In British social theorist Giddens' (1979, 1984) perspective, the traditional view of social structure as a constraint on interaction can be expanded by the recognition that interaction creates the structure of constraint to which it is subjected. J. Grunig (1992c) noted that some organizational communication scholars (e.g., Conrad & Ryan, 1985; McPhee, 1985; Poole, 1985; Poole & McPhee, 1983) developed theories of "how people use communication in the *structuration* of an organization. Structuration means that people create structure as they organize, and they must communicate to do so" (p. 563). In this sense, repeated interactions are the foundation of social structure.

According to the structuration view, "structure is made by interacting individuals whose activities are constrained by structure even as they form the patterns that we then recognize as structure" (Hatch, 1997, p. 180). This idea is called

the *duality of structure*. The duality of structure means that social structures constrain the choices that humans make about their activities, but at the same time social structures are created by the activities that they constrain (Cheney, Christensen, Zorn, Jr., & Ganesh, 2004).

The theoretical dilemma, then, is that "communication helps to produce structure but that structure shapes and limits communication" (J. Grunig, 1992c, p. 563). Communication is a tool used in creating these systems of constraints (structures), but once structures are in place they constrain communication and limit its ability to change the structures (J. Grunig, personal communication, March 3, 2004).

According to Hatch (1997), Giddens' (1979, 1984) work promises to revolutionize conceptions of social structure in organization theory. Its primary influence comes from turning our attention away from an understanding of social structure as a system for defining and controlling interaction and social relationships. It shifts our attention toward how the everyday practices in which organizational members participate construct the very rules of organizing that they follow. Structuration theory helps us see how structure and process are interdependent (Cheney et al., 2004). However, Giddens' theory is not fully formulated at the organizational level of analysis as yet (Hatch, 1997), and only a small number of empirical studies (e.g., Ranson, Hinings, & Greenwood, 1980; Riley, 1983) using his perspectives have been published.

On the other hand, more recent studies in public relations have shown that organizational structure has an effect on internal communication. The influence of organizational structure on organizational communication was well exemplified in the

research by Holtzhausen (2002), J. Grunig (1992c) and L. Grunig et al. (2002). Holtzhausen's (2002) survey research conducted in a large South African organization found that structural changes in process implementation led to improved information flow and face-to-face communication. More specifically, the research showed that addressing the internal communication process from a strategic perspective with subsequent structural changes to enhance that strategy provided practitioners with a tool to improve information flow and change communication behavior in organizations.

J. Grunig (1992c) also noted that organizational structure influences internal communication. According to him, job satisfaction increases when an organization has an appropriate structure for its employees, particularly when that structure promotes autonomy. Decentralized decision making, and low stratification and formalization, are important determinants of job satisfaction.

L. Grunig et al.'s (2002) recent study showed, using the structural equation modeling method, that organizational structure has a strong direct effect on symmetrical communication, which suggests communication practitioners cannot implement a system of symmetrical communication without a change in organizational structure. The study demonstrated that organizations with organic structures, which are decentralized, less formalized, less stratified, and more complex and facilitate participation in decision making, have symmetrical systems of internal communication. On the other hand, organizations with mechanical structures, which are centralized, formalized, stratified, and less complex and do not allow employees to participate in decision making, have asymmetrical systems of internal communication.

Based on the above studies, I posited the first hypothesis:

Hypothesis 1: Organizations with organic[1] (mechanical[2]) structures have symmetrical (asymmetrical) communication systems.

Organizational Justice

Research on justice[3] in organizations has been an interest of researchers for more than 30 years in organizational psychology and management disciplines. The organizational justice literature grew dramatically during the 1990s (Colquitt & Greenberg, 2003). In fact, "organizational justice was cited as the most popular topic of papers submitted to the Organizational Behavior Division of the Academy of Management for several years during the mid-late 1990s" (Colquitt & Greenberg, 2003, p. 167).

Organizational justice refers to the extent to which people perceive organizational events as being fair. Even though there is debate about the types of justice, organizational justice is widely regarded to take three major forms: distributive justice, procedural justice, and interactional justice.

Types of Organizational Justice

Distributive Justice

Early research on justice focused on distributive justice – the perceived fairness of outcome distribution. In organizational settings, distributive justice research commonly used equity theory (Adams, 1965, as cited in Cropanzano & Greenberg, 1997) as a theoretical basis for determining employees' perceptions of

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[1] In this study, I use the term "organic structure" to designate a structure that is decentralized, less formalized, less stratified, and more complex with more participation of employees in decision making.
[2] In this study, I use the term "mechanical structure" to designate a structure that is centralized, formalized, stratified, and less complex with less participation of employees in decision making.
[3] In this study, I use the terms "justice" and "fairness" interchangeably following the conventions of justice research.

fairness associated with particular outcomes. It was proposed that employees compare their relative inputs (e.g., effort, experience, and education) to their outcomes (e.g., rewards and punishments) to determine whether their outcomes are fair. Under equity theory, an employee is believed to perform a mental calculation, comparing one's own ratio of outputs to inputs to the same ratio for a chosen other (Adams, 1965). The individual's perception of fairness depends on the results of this calculation. Equity exists if the two ratios are equal. Distributive justice research demonstrated that individuals consider distributive justice for a variety of organizational outcomes including pay, job challenge, job security, supervision, office space, and layoffs (Ambrose, 2002).

However, although it is often useful to understand how and why people react to the outcomes they receive, a focus on distributive justice leaves many questions unanswered. In particular, when compared with procedural and interactional justice, distributive justice is "a less efficacious predictor of how individuals respond to their employing organizations, as well as to particular decision makers" (Schminke et al., 2000, p. 297). For example, procedural justice and interactional justice have been shown to be associated more with organizational commitment, supervisory commitment, organizational citizenship behaviors, job performance ratings, and trust in management than distributive justice (e.g., Masterson et al., 2000).

Given the importance of the above variables in promoting organizational effectiveness, this study focuses on the role of procedural and interactional justice. Moreover, the two relationship antecedents of this study would seem to have more influence on procedural and interactional justices than on distributive justice. It is reasonable to think that organizational structure and internal communication cannot

control or affect distributive justice (e.g., outcome variables) to a large extent because employees' outcomes are usually more related to their own capabilities and achievements or corporations' distributive policies. Prior research also showed that organizational contextual factors such as structure and internal communication have an impact on procedural justice and interactional justice, not on distributive justice. For example, Schminke et al. (2000) showed three dimensions of structure – centralization, formalization, and size – are related to procedural and interactional fairness.

Procedural Justice

Research on fairness in organizations shifted to an emphasis on procedural fairness – the perceived fairness of procedures. Research on procedural justice began developing in the mid 1970s to early 1980s through two distinct streams of research and theory development (Colquitt, 2001).

The first of these streams encompasses the procedural justice research conducted by Thibaut and Walker (1975, as cited in Lind & Tyler, 1988), whose research on dispute resolution systems indicated that "satisfaction and perceived fairness are affected substantially by factors other than whether the individual in question has won or lost the dispute" (Lind & Tyler, 1988, p. 26). This finding suggested that fairness perceptions went well beyond distributive justice concerns, the primary focus of earlier fairness research, by demonstrating that even when individuals receive unfavorable outcomes, they perceive themselves as fairly treated so long as they had voice or input into the process (process control). When such input is lacking, individuals perceive less fairness. Similarly, people prefer to have decision control or choice (Thibaut & Walker, 1975). For example, when individuals are

allowed to choose their own work tasks they report being fairly treated even when their choice leads to disadvantageous outcomes (Cropanzano & Folger, 1989).

The second primary contributor to the development of procedural justice was Leventhal (1980), who developed his ideas on procedural justice in response to perceived weaknesses in equity theory. Leventhal argued that procedural concerns should be distinguished from outcome concerns and proposed a set of six justice rules to guide the development of procedural justice theory. These rules are: (1) consistency: procedures should be consistent across people and over time; (2) bias-suppression: procedures should protect against self-interested actions by decision-makers; (3) accuracy: procedures should be based on good information; (4) correctability: the opportunity should exist to modify or reverse decision at various points in the process; (5) representativeness: the procedures should reflect the concerns, values, and outlook of subgroups in the population; and (6) ethicality: the procedures should be compatible with the moral and ethical values of those covered by it. When this research found its way from social psychology to organizational sciences, "the field of organizational justice was created and has since flourished" (Colquitt, 2001, p. 390).

Early procedural justice research focused on specific procedures (e.g., voice opportunities, consistency, and opportunity for appeals). This research demonstrated the importance of procedural fairness in a wide range of settings such as performance appraisal, drug testing, selection testing, discipline, budget decisions, recruiting, parking appeals, and layoffs (Ambrose, 2002). The perceived fairness of procedures affected important employee attitudes and behaviors.

As a result of this and related evidence, scholars have advised organizations to

draft formal policies that will be seen as fair. These include procedures for such

human resource practices as staffing (Gilliland, 1993), performance evaluation

(Folger & Lewis, 1993), and downsizing (Brockner, Tyler, & Cooper-Schneider,

1992), among others. However, it should be noticed that all of these interventions

have in common the fact that they change operating procedures. The organizational

context in which these policies are enacted is left unaltered. In this study, I suggested

a new approach – looking to the organizational context such as structure and internal

communication as a means of enhancing procedural justice.

Interactional Justice

In the 1990s, justice research broadened again as researchers began to examine

the "social side" of justice. Bies and Moag (1986) introduced the construct of

"interactional justice" to capture the quality of interpersonal treatment the target

receives from an organizational decision maker. This third type of justice suggests

that an authority figure is interactionally fair to the extent that he or she (1) treats

employees with dignity and (2) provides individuals with important information

(Schminke et al., 2000).

As a first attempt at developing the elements of interactional justice, Bies and

Moag (1986) identified four criteria dealing with communication and interpersonal

treatment based on two previous studies of MBA students' reactions to their recruiting

experience. These four dimensions are: (1) truthfulness, or open and honest

communication; (2) respect, or lack of rude or attacking behavior; (3) propriety of

questions; and (4) adequate justification for actions.

As with distributive justice and procedural justice, there is substantial

empirical support for the effect of fair interpersonal treatment on individuals' attitudes

and behaviors (e.g., Greenberg, 1988, 1993). When individuals are treated in an interpersonally fair manner, they tend to have high-quality relationships with their supervisors, perform helpful organizational citizenship behaviors, and have high job performance (Schminke et al., 2000).

Organizational scientists also have designed interventions that enhance interactional justice. These usually involve training supervisors to change their interpersonal behavior. For example, Taylor, Tracy, Renard, Harrison, and Carroll (1995) taught managers to provide interactionally just performance evaluations. Similarly, in two studies, Skarlicki and Latham (1996, 1997) trained union officials to facilitate interpersonal justice. These behavioral interventions seem to have been effective. However, as with procedural justice, these interventions ignore the organizational context in which the behavior occurs. Thus, in this study, I present a complementary perspective to interactional justice as I investigate the relationship between organizational structure and internal communication and interactional justice.

Interactional Justice vs. Procedural Justice

There is a debate about the status of interactional justice. Some researchers treat it as a component of procedural justice (e.g., Tyler & Blader, 2000; Tyler & Lind, 1992). Others treat it as a third form of justice, independent of procedural and distributive justice (Bies, 2001; Materson et al., 2000). However, recent empirical research has supported Bies and Moag's (1986) initial proposition that interactional justice is a distinct type of fairness, primarily because it has different relationships with outcomes. Specifically, a number of studies have found that, when formal procedural and interactional justice perceptions are measured separately, the two have differential relationships to both employee attitudes and behaviors (Masterson, 2001).

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The results of these studies support the proposition that procedural and interactional justice should be considered as separate.

Despite disagreement about which justice constructs are conceptually distinct from others, there is no disagreement about the importance of these constructs to individuals and the impact they have on individual behavior. Research has demonstrated that the perceived fairness of outcomes, the perceived fairness of procedures, and the perceived fairness of interactional treatment are each associated with important organizational behaviors and attitudes. When individuals feel unfairly treated by their organizations they respond both affectively (e.g., with lower commitment) and behaviorally (e.g., with increased turnover, theft, and decreased helping behavior). Thus, after more than 30 years of research on justice in organizations, organizational scholars have concluded with confidence that people care about the fairness of their outcomes, the fairness of the procedures to which they are subjected, and the fairness of the interpersonal treatment that they receive.

Three Major Issues in Organizational Justice Research

Cropanzano and Greenberg (1997) noted that although the research on organizational justice is voluminous, at its core, the research generally addresses one of three questions: (1) Why do people care about justice? (2) What affects justice judgments? and (3) What outcomes are associated with justice judgments? This study was meaningful in that it can help answer two of the above three questions by applying the justice theory to public relations. Organizational structure and internal communication form the organizational context that often affects justice judgments, and the six dimensions of relationships can be outcomes that are closely associated with organizational justice.

Organizational Justice as a Relationship Mediator

Justice and Relationship Types

A plethora of researchers have suggested that organizational justice (especially, procedural and intereactional justice, see Moorman, Blakely, & Niehoff, 1998; Pillai, Schriescheim, & Williams, 1999) facilitates the formation of social exchange relationships. According to Masterson et al. (2000), researchers can fully understand how employees experience the effects of fairness only by studying relationship variables simultaneously. For example, research has addressed the mechanisms by which employees' perceptions of social exchange variables such as leader-member exchange (LMX) and perceived organizational support (POS) are related to attitudes and behavior. Studies have suggested that fairness mediates individuals' judgments on their work-place relationships (Moorman et al., 1998).

In essence, organizational researchers have argued that employees perceive acts of fairness to be contributions that enhance the quality and desirability of their ongoing relationships. These contributions in turn obligate employees to reciprocate in ways that preserve social exchange relationships, through voluntary behaviors or attitudes that benefit the parties who treated them fairly. Masterson et al. (2000) noted that social exchange relationships appear to be the most direct antecedents of employees' attitudes and behaviors, and they provided a mechanism explaining how the perceived fairness of single events can have long-term effects within organizations.

Social exchange relationships are different from those based on purely economic exchange in that social exchange relationships develop between two parties through a series of mutual, although not necessarily simultaneous, exchanges that yield a pattern of reciprocal obligation in each party (Blau, 1964, as cited in Materson

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et al., 2000). As I noted earlier, public relations scholars borrowed the concept of social exchange to coin the term "communal relationship". This means justice may influence employees' communal relationships with organizations positively.

Masterson (2001) also developed a trickle-down model of organizational justice, proposing that employee' perceptions of fairness are the trigger to the employee-customer relationship. More specifically, she noted that employees' perceptions of fairness affect their attitudes toward and perceptions about the organization such as organizational commitment, job satisfaction, and perceived organizational support, and subsequently influencing their behaviors toward customers such as effort and prosocial behaviors. In turn, according to her, customers interpret these employee behaviors as signals that the employee is treating them fairly, leading to positive reactions to both the employee and the organization as a whole. The study suggested that an organization's fair treatment of its employees has important consequences, not only for employees, but also for the organization through customers' attitudes and future intentions toward key service employees. This study echoes Schneider, Gunnarson, and Niles-Jolly's (1994) contention that employees treat customers as they themselves have been treated by the organization.

The literature review up to this point led me to my second hypothesis:

Hypothesis 2: Perceived organizational justice is positively (negatively) related to a communal (exchange) relationship.

Justice in the Organizational Context

Organizational structure and organizational justice. Traditionally, research on organizational justice has taken a micro-level approach to investigate the phenomenon (Schminke et al., 2000). Many organizational researchers have overlooked the

organizational context within which fair, or unfair, interactions occur. Yet, organizational decisions occur in a larger context; and this context may affect perceptions of fairness (See Lind & Tyler, 1988, pp. 136-141).

Theoretical work suggests that organizational structure may influence the perceptions of organizational justice (e.g., Sheppard et al., 1993; Ambrose & Schminke, 2001). For example, Sheppard et al. (1993) noted that allocation decisions do not take place in a social vacuum. Rather they are embedded within organizational systems that have somewhat distinct architectures. The structure of some organizations allows participation, provides due process, and so on. Sheppard et al. referred to such organizations as *systemically fair*. The structure of other organizations emphasizes shareholder profits to the exclusion of worker and community interests. Such organizations are *systematically unfair*.

Greenberg (1993) noted that justice is often the result of one-on-one social transactions, but these social interactions are only one determinant of fairness. Greenberg also observed that justice often results from the formal structure of the organization. From this, it follows that the structural dimensions of organizations can increase or decrease fairness. Indeed, some of the relevant structural dimensions reflect the very issues involved in fairness perceptions: the concentration of power, the degree of individual voice, the ability to influence others, the existence of formal rules and regulations, and so on (Greenberg, 1993).

Conceptual links between organizational structure and justice were also outlined by Keeley (1988). Keeley maintained that there is a fundamental tension within organizations between the goal of efficiency and the goal of morality. Social institutions struggle to maintain a delicate balance between these competing

objectives. Firms may attempt to resolve this tension at a system level. Therefore, some organizations attempt to structure themselves in a way that will promote social justice as well as economic profit. Keeley argued that organizations that do not take human diginity into account are inherently unjust.

Despite the logical appeal of these ideas, relatively little research has examined them directly. However, recent research by Schminke et al. (2000) has significantly contributed to the body of knowledge on this subject. Schminke et al. hypothesized that three dimensions of structure – centralization, formalization, and size – would be related to procedural and interactional fairness. They found that centralization was negatively related to perceptions of procedural fairness and that size was negatively related to interactional fairness.

The conceptual groundwork laid by Greenberg (1993), Keeley (1988), Schminke et al. (2000), and Sheppard et al. (1993) suggests that individuals' sense of justice is partially a product of the organization and its structure. In this study, I examine this link between organizational structure and justice. Following the lead of L. Grunig et al. (2002), I explore structure using centralization, stratification, formalization, complexity, and participation in decision-making as focal structural dimensions.

Summing up the above discussion, I suggest the following hypothesis on the relationship between organizational structure and organizational justice:

Hypothesis 3: Organic (mechanical) organizational structure is positively (negatively) related to employees' perceived justice.

Internal communication and organizational justice. Few studies have been done on the relationship between internal communication and organizational justice.

However, several justice studies have stressed the critical role that communication plays in shaping perceptions of procedural justice and interactional justice. For example, perceived procedural fairness was higher when employees experienced feedback, "voice," or input opportunities and sincerity and trustworthiness in information exchange (e.g., Bies & Shapiro, 1987).

Recently, J. Lee (2001) reported on the relationship between perceptions of organizational justice and cooperative communication in organizations. Cooperative communication in the work group refers to message exchange behaviors and activities designed to facilitate the joint achievement of work-group goals (J. Lee, 1997). As individuals become more cooperative in attaining work-related goals with other group members, they exchange more information, share ideas and resources, and show concern and interest in what others want to accomplish. They are more responsive, supportive, and open to each other's needs and consult and discuss issues to reach mutually satisfying agreements. One potential factor that moderates the perceptions of organizational justice is the quality of cooperative communication relationships among group members. J. Lee (2001) found that as subordinates believe communication becomes more cooperative, they tend to perceive greater fairness in distributive outcomes and procedures.

Even though there has been little research about the influence of types of communication on justice perception, it is still possible to hypothesize, from the above empirical studies and through rational reasoning, that symmetrical communication will have a positive impact on justice perception, while asymmetrical communication will have a negative impact. According to J. Grunig and White (1992), communication is symmetrical when both parties are willing to adjust their behaviors

to resolve conflict, improve understanding, and build relationships for mutual benefit. Symmetrical communication takes place through dialogue, negotiation, listening, and conflict management rather than through persuasion, manipulation, and the giving of orders. Thus, in a symmetrical communication situation, employees will feel they are more fairly treated.

In contrast, communication is asymmetrical when organizations develop messages that are designed to persuade publics to behave as the organizations want without any interference. Asymmetrical communication in organizations is generally top-down and remains popular among members of dominant coalitions who strive to increase their power and to control others, rather than to empower employees throughout the organization. Therefore, employees will perceive that they are being treated unfairly when organizations use asymmetrical communication.

These arguments led me to the following hypothesis:

Hypothesis 4: Symmetrical (asymmetrical) communication is positively (negatively) related to employees' perceived justice.

The justice literature reviewed thus far suggests that what has been lacking in previous theory on justice is consideration of the organizational context within which organizational justice is administered. This study contributed to filling this gap because the two proposed antecedents are organizational context where employees' fairness perceptions are developed.

Justice and Relationship Outcomes

Even though there is only a small amount of empirical evidence that structure and internal communication are related to organizational justice, the other part of the proposed model (see Figure 1), a linkage between organizational justice and employee

relationship outcomes, found much more support in the literature. A significant amount of research has shown that perceived fairness in organizations has been associated with job satisfaction, organizational commitment, performance, citizenship behavior, and turnover (Colquitt et al., 2001).

Nearly three decades of laboratory and field research (for reviews see Colquitt & Greenberg, in press; Lind & Tyler, 1988; Tyler & Lind, 1992) also provide convincing evidence that fairness judgments affect a variety of employee attitudes and behavior and that these effects are substantial. A stream of research has provided documentation of the harmful effects that injustice can have on employees. When employees feel that they are unfairly treated, they show a decline in job satisfaction (Aryee et al., 2002; Folger & Konovsky, 1989), organizational commitment (Daly & Geyer, 1995; Masterson, 2001; Viswesvaran & Ones, 2002), trust (Aryee et al., 2002), helpful citizenship behaviors (Aryee, 2001; Moorman, 1991; Organ & Moorman, 1993), and job performance (Gilliland, 1994; Konovsky & Cropanzano, 1991). Unfairly treated individuals also show a heightened propensity to turnover (Dailey & Kirk, 1992), engage in conflict (Ambrose, Seabright, & Schminke, 2002; Folger & Cropanzano, 1998), and experience stress (Zohar, 1995). These studies demonstrated that judgments of fairness influence employees' satisfaction, commitment, and trust, which are three of the outcomes of relationships in public relations research.

Even though there has been little research about the relationship between justice perceptions and control mutuality, it is possible to infer the relationship from theoretical works. Stafford and Canary (1991) conceptualized control mutuality as whether the contending parties in a relationship agree that one or both may *rightfully* influence the other. The definition of control mutuality itself implies that justice

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perception can influence control mutuality. I think it is possible to reason that employees would think they have more control over the organizational relationship when they are treated more fairly. This suggests a close linkage between organizational justice and control mutuality.

L. Grunig et al. (1992) argued that equality of power might not be necessary but that *a norm of reciprocity* may produce a quality relationship even if power is unequal. Although power asymmetry is inevitable in interpersonal, interorganizational, and organization-public relationships, the sense of control mutuality between the opposing parties in a relationship is critical to interdependence and relational stability (Stafford & Canary, 1991).

Based on the literature review and arguments, I posited the following hypothesis.

Hypothesis 5: Perceived organizational justice is positively related to employees' commitment, trust, satisfaction, and control mutuality.

Also, with respect to the role of organizational justice as an employee-organization relationship mediator, I posited the following hypotheses.

Hypothesis 6a: The association between organizational structure and employee-organization relationships is partially mediated by organizational justice.

Hypothesis 6b: The association between internal communication and employee-organization relationships is partially mediated by organizational justice.

Organizational Structure/Internal Communication and Relationship Dimensions: A Direct Influence?

So far, it has been suggested that organizational justice may mediate the influence of organizational structure and internal communication on employee

relationship dimensions. A possibility that I have not considered is that organizational structure and internal communication may influence relationship dimensions directly. Thus, the total effects of organizational structure and internal communication on employee relationship dimensions may be the result of a combination of unmediated and mediated effects. Fairness perceptions may only partially mediate the influence of organizational structure and internal communication on employee relationship dimensions. Therefore, this study also examines the direct effect of the two antecedents on relationship dimensions.

There have been few studies on the influence of the two proposed antecedents on employee relationships. However, some pioneering research (Avtgis, 2000; Flower, 1993; Marlow & O'Connor, 1997; Mueller & Lee, 2002; Pincus, 1984, 1986; Pincus, Knipp, & Rayfield, 1990) has paid attention to this subject. For example, J. Grunig (1992c) noted that organizational structure and communication are strongly related to employee satisfaction, which is one of the relationship outcomes. Marlow and O'Connor (1997) also noted that the quality of relationships could be increased by facilitating participation and communication in all directions and overcoming barriers to knowledge sharing (p. 68).

Several studies have demonstrated that communication style (types and preferences) is a predictor of satisfaction in employment interviews and performance appraisal meetings (e.g., Downs, 1992; Ellingson & Buzzanell, 1999; Ralston, 1993). Further, satisfaction has been found to be positively affected by communication openness (Suckow, 1995), interaction involvement and quality (Mohr & Sohi, 1995), and participation in decision making (Wheeless, Wheeless, & Howard, 1984).

Also, using the concept of communication climate, Pincus et al. (1990) explored the relationship between communication and job satisfaction. Communication climate was defined as "the pattern of how people communicate, the degree to which individuals perceive organizational communication to be supportive, and as a subjective experience identified through members' perceptions of organizational messages" (p. 174). Pincus et al. (1990) showed that a positive relationship exists between employees' perceptions of organizational communication and their perceived job satisfaction.

More recently, in an experimental study on the impact of change communication management approaches on relationships with employees, Stroh (2000) posited that communication should be used strategically in order to build trust, commitment, mutual satisfaction, and mutual control of relationships with all the important stakeholders of the organization. Especially, in today's management environment, where there is drastic and turbulent change, information should flow more freely so that "systems can adapt faster to environmental changes using feedback and intelligence, as opposed to traditional reaction to secure information and control it" (Stroh, 2000, p. 22).

On the other hand, in a more micro-level relationship study, Mueller and J. Lee (2002) explored the extent to which subordinates' perceptions of communication satisfaction affected the quality of leader-member exchange (LMX). According to them, high-quality LMXs are the results of "open" communication exchange in which subordinates are afforded greater amounts of trust, confidence, attention, inside information, negotiating latitude, and influence without recourse to authority. In contrast, a "closed" communication system is closely related to low-quality LMXs in

which superiors use formal authority to force the member to comply with a prescribed role. Considering conceptual similarities between the typology of open and closed communication with the one of symmetrical and asymmetrical communication, it is logical to posit that symmetrical communication influences relationship outcomes positively and asymmetrical communication affects relationship outcomes negatively.

Even though there has been little research about the influence of internal communication on internal relationship types, from the above arguments it also follows that there is a positive relationship between symmetrical communication and a communal relationship because a communal relationship is more related to high evaluations of the four outcome variables than an exchange relationship.

The linkage between organizational structure and employee-organization relationships has received far less attention than the link with communication. There has been little research on this relationship. However, some pioneering endeavors can be found. For example, as I wrote earlier, research has shown that employees who participate in decisions involving them (which is the fifth variable of structure in this study) have higher levels of organizational commitment (Boshoff & Mels, 1995). In an extensive review of the effect of participation on performance, Wagner (1994) concluded that participation could have a statistically significant effect on both performance and satisfaction.

Thus, it is logical to posit that organic structure that allows employees to participate in decision making influences relationship outcomes positively. Conversely, mechanical structure may affect relationship outcomes negatively. It also follows that there is a positive relationship between organic structure and a communal

relationship because a communal relationship is more related to high evaluations of the four outcome variables than an exchange relationship.

Given that the above studies focused on only one or two separate dimensions of relationships, the need for a comprehensive study to find linkages between the proposed antecedents and all relationship dimensions is imperative. Thus, I posited the following hypotheses:

Hypothesis 7a: Symmetrical (asymmetrical) internal communication is positively (negatively) related to employees' satisfaction, trust, commitment, and control mutuality.

Hypothesis 7b: Symmetrical (asymmetrical) internal communication is positively related to a communal (exchange) relationship.

Hypothesis 7c: Organic (mechanical) organizational structure is positively (negatively) related to employees' satisfaction, trust, commitment, and control mutuality.

Hypothesis 7d: Organic (mechanical) organizational structure is positively related to a communal (exchange) relationship.

<div align="center">Summary</div>

In order to develop an antecedent model of employee relationships (see Figure 1, p. 14), I reviewed interdisciplinary literature that dealt with the links between employees' perceptions of justice and relationships and organizational contexts such as structure and internal communication. Major theoretical concepts framing this study included relationship management, organizational structure and internal communication, and organizational justice.

In the conceptualization chapter, I first proposed the need for further research on relationship antecedents. The antecedents of relationships have paramount importance in relationship research because they cause specific relationships between an organization and its publics to develop. Even though the importance of antecedents of relationships was recognized among public relations scholars, there has been little research to examine the nature and functions of relationship antecedents.

I selected *organizational structure* (J. Grunig, 1992b, p. 225) and *internal communication* (J. Grunig, 1992b, p. 231) as two key antecedents that this study examined. I chose the above two constructs because this study primarily explored internal relationships in organizations. Among many possible factors, I argued organizational structure and internal communication might be the strongest antecedents of employee-organization relationships.

Meanwhile, two types of relationships and four types of outcomes were adopted to assess employee-organization relationships in this study. This study chose Hon and J. Grunig's (1999) two types of relationships (communal and exchange relationship) and four types of outcomes (control mutuality, trust, commitment, and satisfaction) because of its recognized significance and wide acceptance in public relations research.

Also, I incorporated the theory of organizational justice into this study as a mediator because prior research in organizational studies has produced considerable evidence that justice mediates the influence of structure and internal communication on employees' perceptions of internal relationships. Organizational structure and internal communication seemed to have effects on organizational justice. Much empirical support existed for the influence of perceptions of fairness on employees'

satisfaction, commitment, and trust, which are three of the relationship outcomes in public relations research. This suggested that there are close linkages between organizational justice and relationship dimensions.

Reviews of the main theoretical concepts framing this study identified the following hypotheses.

Hypothesis 1: Organizations with organic (mechanical) structures have symmetrical (asymmetrical) communication systems.

Hypothesis 2: Perceived organizational justice is positively (negatively) related to a communal (exchange) relationship.

Hypothesis 3: Organic (mechanical) organizational structure is positively (negatively) related to employees' perceived justice.

Hypothesis 4: Symmetrical (asymmetrical) communication is positively (negatively) related to employees' perceived justice.

Hypothesis 5: Perceived organizational justice is positively related to employees' commitment, trust, satisfaction, and control mutuality.

Hypothesis 6a: The association between organizational structure and employee-organization relationship is partially mediated by organizational justice.

Hypothesis 6b: The association between internal communication and employee-organization relationship is partially mediated by organizational justice.

Hypothesis 7a: Symmetrical (asymmetrical) internal communication is positively (negatively) related to employees' satisfaction, trust, commitment, and control mutuality.

Hypothesis 7b: Symmetrical (asymmetrical) internal communication is positively related to a communal (exchange) relationship.

Hypothesis 7c: Organic (mechanical) organizational structure is positively (negatively) related to employees' satisfaction, trust, commitment, and control mutuality.

Hypothesis 7d: Organic (mechanical) organizational structure is positively related to a communal (exchange) relationship.

Initial Conceptual Model

Combining the links between organizational structure, internal communication, organizational justice, and employee-organization relationship types and outcomes, I developed a conceptual model, which was shown as Figure 1 (p. 14).

CHAPTER III

METHODOLOGY

This study explored the influence of organizational structure and internal

communication on employee-organization relationships with the mediating factor of

organizational justice. The hypotheses posited a priori were tested using the survey

method. This chapter, first, demonstrates the appropriateness of the survey method.

Second, I examine the necessity of doing multilevel analysis for this study. Third,

research design, measurement items, and the data analysis method are described.

Lastly, ethical considerations are explored.

Survey Research

Patton (1990), when discussing the use of research methodology, stressed the

importance of choosing a methodology that is most appropriate to the type of

information the research needs. He also argued that the method should represent the

best match to the intended use. In this study, I considered the relationship between

theory and data collection as data being collected to test the pre-established model

rather than as theory being used to explain data. I tried to seek the kind of verifiable

truth (Popper, 1965) that functions in the proposed model. According to Popper

(1965), data can never positively confirm a model; they can only fail to disconfirm it.

Therefore, I thought a quantitative method was more appropriate for this study than a

qualitative one.

What Is a Survey?

More specifically I chose the survey method. I selected the quantitative survey

technique for its distinguishing features. The basic aim of survey research is to

describe and explain statistically the variability of certain features of a population

(Babbie, 1998). Using surveys, researchers collect data in a standardized format. Usually, a probability sample of the population is used because surveys strive for generalizability of sample statistics (external validity). The ultimate purpose of survey sampling is to select a set of elements from a population in such a way that descriptions of those elements accurately describe the total population from which they are selected.

The other pillar of surveys is theories of standardized instruments. Theories of standardized instruments try to minimize non-sampling error, which arises from biased instruments, interviewer biases, and interviewee biases such as acquiescence and social desirability (Converse & Presser, 1986). Strengths of surveys include their accuracy, generalizability, and convenience (Babbie, 1998). Accuracy in measurement is enhanced by quantification, replicability, and control over observer effects. Survey results can be generalized to a larger population within known limits of error. Surveys also are amenable to rapid statistical analysis.

Strengths of Survey Research

The rationale that makes the survey method appropriate as a data-gathering and data-analysis technique for this study is as follows. First, as Weisberg, Krosnick, and Bowen (1996) held, the survey method is suitable for testing a pre-established model. Major concerns of this study were to develop an antecedent model of organizational relationships and to examine the links among main concepts. For survey research, a variety of statistical methods permit the empirical study of the adequacy of proposed models and advanced theory development (Raykov & Widaman, 1995).

Second, surveys are suitable for use in measuring answers to questions concerning attitudes, beliefs, and behavior. According to Weisberg et al. (1996), surveys are appropriate for measuring attitudes (or preferences), beliefs (including predictions and assessments of importance), or facts (including past behavioral experiences). In this study, one guiding assumption was that the respondents' assessments of organizational justice and relationships would be determined by their perceptions. Also, how respondents perceive their organizations' structural and communicational aspects were imperative in this study. Thus, survey research, which is appropriate for measuring perceptions, was well-suited for this study.

Third, standardized questionnaires are also a significant strength of survey research (Babbie, 1998). Collective perceptions and attitudes of organizations' members can be conveniently measured using a survey. In this study, the collective perceptions of employees in organizations towards the four main organizational constructs (structure, internal communication, justice, and relationships) could be measured by a survey. As Weisberg et al. (1996) noted, when public perceptions and mass behavior are of interest, surveys play an important role in social science.

Weaknesses of Survey Research

Survey research has been criticized because it cannot provide in-depth contextual information and because it is inflexible (Babbie, 1998; Sypher, 1990). I do not think this deficiency of survey research severely affected this study because its main purpose was not to explore the impact of the specific social-cultural-political contextual variables on employees' perceptions of relationships. In other words, this study was not designed to investigate how the constructs examined interacted with their social-cultural-political contexts, but rather to investigate the relationships

between the organizational constructs such as structure, internal communication, and justice and organizational relationships. Also, a careful research design, I argue, could considerably reduce the problem of lack of flexibility (Huang, 1997). For example, survey instruments with high reliability and validity from relevant literature were used in this study to minimize unreliability. Also, a pretest was conducted to assure the concepts tested and the measurement instruments selected were appropriate to the research locale.

Multilevel Analysis

Why Is a Multilevel Analysis Necessary?

According to Klein et al. (1994), organizations are multilevel, by their very nature, because employees work in groups and teams within organizations that are related with other organizations (p. 198). Accordingly, it is inevitable that levels issues pervade organizational studies. This nature of organizations led Klein et al. (1994) to argue that "no construct is level free" (p. 198) in organizational research and that "to examine organizational phenomena is thus to encounter levels issues" (p. 198).

Giddens (1976, as cited in McPhee & Poole, 2001), more than a quarter century ago, noted the importance of multilevel analysis. According to him, theories that seem perfectly good at one level are often found to be "weak" at the other, either because they incorrectly reduce one level to an adjunct of the other, they oversimplify one level, they neglect to theorize one level, or they neglect relationships between levels.

A more specific proposal regarding the level-of-analysis challenge has been proposed by House et al. (1995). They suggested that organizational research has

traditionally been bifurcated into "micro" and "macro" camps and that fuller understanding of organizational phenomena will come only when researchers also look at the "meso" level.

To neglect these systems' structure in research design will "result in an incomplete and mis-specified model" (Klein & Kozlowski, 2000, p. 232) because "blindly generalizing findings across levels of analysis is a fallacy" (p. 213). Findings at one level of analysis "do not generalize neatly and exactly to other levels of analysis" (Firebaugh, 1979, as cited in Klein & Kozlowski, 2000, p. 213).

This study was a typical example of multilevel research in that it gathered and summarized individual-level data to operationalize organizational-level constructs such as organizational structure and internal communication. According to Klein and Kozlowski (2000), when researchers collect data from individuals to research organizational constructs, the levels issue is unavoidable. In the absence of careful theoretical work and subsequent statistical analyses, higher-level findings using data gathered in lower levels are likely to be illusory (James, 1982).

Recalling Klein et al.'s (1994) convincing argument that no construct is level free in organizational research, I came to realize that many public relations studies, especially the ones that deal with internal organizational relationships, cannot avoid being the subject of multilevel analysis. This study was not an exception because it was dedicated to examining relationships of organizational phenomena like structure, internal communication, justice, and relationships.

Issues in Multilevel Research

According to Klein et al. (1994), levels issues create particular problems "when the level of theory, the level of measurement, and/or the level of statistical

analysis are incongruent" (p. 198). Here, I need to clearly define the terms used in multilevel research. The level of theory means the target that a theorist or researcher aims to depict and explain. "It is the level to which generalizations are made" (Rousseau, 1985, p. 4). The level of measurement describes the actual source of the data, and the level of statistical analysis describes the treatment of the data during statistical procedures (Klein et al., 1994, p. 198).

When the levels of theory, measurement, and statistical analysis are not identical, the obtained results may not reflect the level of theory; instead, they may reflect the level of measurement or statistical analysis (Klein et al., 1994). In attributing the results to the level of the theory, a researcher may draw a wrong conclusion. Thus, after researchers have specified the level of theory, they should collect data that conform to the level of theory and align data analysis with the level of theory. My review of multilevel analysis follows this framework (the level of theory, measurement, and statistical analysis) because I think it provides a useful and insightful way to examine levels issues.

The Level of Theory

A critical step in addressing levels issues is the specification of the level of one's theory. This means that the primacy of multilevel analysis should be a theory. Klein et al. (1994) stated that statistical tests and analyses should build upon a theory. They cannot be substitutes for a theory.

Rousseau (1985) noted that "theories must be built with explicit description of the levels to which generalization is appropriate" (p. 6). The failure to specify explicitly a precise level of a theory causes confusion and controversy about the meaning of the theory and conclusions to be drawn from tests of the theory (Klein et

al., 1994). Thus, precise explication of the level of a theory is the building block of multilevel analysis. It lays the foundation for sound measurement.

To build clear and persuasive theoretical models, scholars must explicate the nature of their constructs with care (Kozlowski & Klein, 2000). Researchers should explicitly specify the level of each construct in a theoretical system. The level of a construct is "the level at which it is hypothesized to be manifest in a given theoretical model – the known or predicted level of the phenomenon in question" (Kozlowski & Klein, 2000, p. 27). Thus, the first and foremost task in crafting a multilevel theory or study is "to define, justify, and explain the level of each focal construct that constitutes the theoretical system" (p. 27).

The most familiar level of a construct is that of an independent individual. If a researcher specifies that the level of a theory is independent individual members of an organization, he or she anticipates that the individuals are independent of the organization's influence (Klein et al., 1994). At this level of theory, group membership is irrelevant to the theory's constructs because variations in the constructs are simply between individuals. Thus, the researcher needs ample between-individual variability to test a theory that predicts individual independence.

According to Klein and Kozlowski (2000), researchers also need to distinguish among three basic types of unit-level constructs to define, justify, and explain the level of constructs: global unit constructs, shared unit constructs, and configural unit constructs.

Global unit constructs pertain to "relatively objective, descriptive, and easily observable characteristics" (Klein & Kozlowski, 2000, p. 215). Global unit constructs do not originate in individuals' perceptions, experiences, attitudes, demographics,

behaviors, or interactions but are a property of the unit as a whole. Unit function and unit size can be examples.

Shared unit constructs "originate in experiences, attitudes, perceptions, values, cognitions, or behaviors that are held in common by the members of a unit" (Klein & Kozlowski, 2000, p. 215). Examples include unit climate or team norms. In postulating that a given variable is a shared unit property, theorists and researchers ideally explain how and why unit members come to share the construct of interests. Within-unit variability is predicted to be low or non-existent.

Confugural unit constructs "capture the array, pattern, or variability of individual characteristics" (Klein & Kozlowski, 2000, p. 217) within a unit but these originate in unit member characteristics such as demographics, behaviors, personality, and attitudes. Examples are demographic diversity, affective diversity, and network density. In studying these, researchers make no assumption that the individual characteristics of interest are held in common by the members of the team. This means lower-level characteristics, behaviors, and perceptions may not coalesce. Instead, lower-level characteristics, behaviors, and/or perceptions may vary within a group or organization, and yet the configuration or pattern of lower-level characteristics, behaviors, and/or perceptions may nevertheless emerge, bottom-up, to characterize the unit as a whole.

In this study, two of the four main constructs – organizational structure and internal communication – were *shared unit constructs*. This is because organizational members must feel or perceive in sufficiently similar ways with respect to the above two constructs. Employees will feel the same way about organizational structure and internal communication because all of them are living under the influence of the same

structure and system of internal communication. Once the organizational structure and internal communication system are established in organizations, it is hard to change those contexts and all employees will be similarly influenced by the contexts. It is not possible for the above organizational contexts to influence some employees more strongly. Therefore, the constructs could be characterized as a whole, and a single value or characteristic might be sufficient to describe the organization.

On the other hand, the other two constructs – organizational justice and relationships – seem to be *individual-level constructs* because the constructs deal with individual perceptions. Organizational justice refers to the extent to which people *perceive* organizational events as being fair. Employee-organizational relationships are measured by employees' *perceptions* of internal relationships. Thus, in these two constructs, individuals are independent of an organization's influence. Employees may feel differently about organizational justice and employee-organization relationships depending on each individual's different and independent perceptions, behavior, attitudes, and relationship with an organization. For example, employees' perceptions of justice can differ from employee to employee according to personal evaluations of supervisors with whom they interact directly. Thus, variance of the two constructs lies in between-individual variability.

The Level of Measurement

After the level of a theory is precisely specified and explicated, researchers should collect data that conform to the level of theory (Klein et al., 1994). Individual level constructs should be measured at the individual level. A researcher needs sufficient between-individual variability to test a theory that expects individual independence.

Among three types of unit-level constructs, the measurement of the global properties of a unit is least complex and least controversial. There is no need to ask all the individuals within a unit to describe its global properties. A single expert individual may serve as an informant when the characteristic is observable, or when the informant has unique access to relevant information (Kozlowski & Klein, 2000).

The data to measure shared unit properties should be assessed at the individual level, and sharedness within the unit should be evaluated. Researchers will focus on the unit as a whole and try to maximize between-group variability in the sample. Considering restricted within-unit variance, the aggregate (mean) value of the measure should be assigned to the unit.

When assessing shared unit constructs, researchers have to demonstrate substantial within-group agreement before using the mean of unit members' scores to represent the unit. Without information about within-unit agreement, the data gathered to represent the shared unit construct "lack critical construct-level validity"(Klein & Kozlowski, 2000, p. 216). Composition process models through which shared properties emerge are based on the premise that lower-level phenomena are isomorphic with each other and with the higher-level construct (Bliese, 2000). *Composition models* specify "the functional relationships among phenomena or constructs at different levels of analysis that reference essentially the same content but that are qualitatively different at different levels" (Chan, 1998, p. 234). Emphasis on interchangeability suggests that when one's theoretical model is based on a composition process, within-group agreement is the appropriate index to use in establishing the validity of the measurement model. In the absence of within-group agreement, "one's measurement model would be unsupported" (Bliese, 2000, p. 368).

To establish agreement, one needs to demonstrate that responses from group members are more similar to each other than would be expected by chance (Klein et al., 1994). What makes the task of establishing agreement controversial "revolves around how one defines greater than chance similarity" (Bliese, 2000, p. 350).

According to Bliese (2000), there are two ways to define greater than chance similarity. Consensus- or agreement-based approaches – for example, within-group interrater agreement (r_{wg}) – evaluate "within-group variance against a hypothetical expected-variance (EV) term" (Kozlowski & Klein, 2000, p. 35). Agreement is examined for each shared property measure for each unit: a construct-by-group approach. Consistency- or reliability-based approaches – for example, intraclass correlation coefficient (ICC) (1), ICC(2), and within-and-between analysis (WABA) – evaluate "between-group variance relative to total (between and within) variance, essentially examining interrater reliability for each shared property across the sample: a construct-by-sample approach" (Kozlowski & Klein, 2000, p. 35). This means a number of statistical indicators such as r_{wg}, eta-squared, ICC(1), ICC(2), or WABA are available. Klein et al. (2000) urged researchers to use a number of these indices before aggregating their measures.

In operationalizing the configural properties of a unit, a researcher need not evaluate consensus, similarity, or agreement among individual members except to rule out coalescence. Researchers use measures that highlight the position of each individual relative to the group mean. A researcher might collect data across a number of groups asking an expert on each group to use a forced choice scale to rank order the members of each group with respect to the construct of interest (Kozlowski & Klein, 2000).

The mean of individual members' characteristics is generally not an appropriate summary statistic to depict a configural unit property, although it may be combined with an indicator of variance or dispersion. In the absence of within-unit consensus, means are equifinal, ambiguous, and questionable representations of higher-level constructs (Bliese, 2000). Possible operationalizations of this type of constructs include the sum of individual team member values, indices of variability among team member values, or the minimum or maximum value among a group's members (Klein & Kozlowski, 2000, p. 217).

Bliese (2000) noted that one does not need to establish agreement to support the construct validity for this type of construct. He also wrote that in compilation models (i.e., configural unit properties), measures of reliability would also tend to be irrelevant. This is because "reliability-based measures provide estimates of the reliability of a single assessment of the group mean, ICC(1), or an estimate of the reliability of the group mean, ICC(2)" (Bliese, 2000, p. 367). Research on configural constructs, however, does not model the group mean except as potential covariates (Bliese & Halverson, 1998), so the issue of group-mean reliability is not important to one's conceptual model.

In this study, for the constructs of structure and internal communication, considering that they are shared unit constructs, I gathered data from employees in organizations and aggregated the data to represent organizational constructs. I also needed to demonstrate substantial within-group agreement prior to using the mean of unit members' scores to represent each group, so I used r_{wg}, ICC(1), and ICC(2) to justify aggregation. For the constructs of relationships and justice, I gathered data at the individual level because the two constructs are individual-level constructs.

The Level of Statistical Analysis

Researchers can enhance the quality of their research by aligning their analyses to the level of theory. They also can do it by examining the fit of the data to the theory's predictions of construct nature (Klein et al., 1994). If the level of statistical analysis fits with the level of theory, but the data do not conform to the predicted level of theory, researchers may draw wrong conclusions from the data. When data do not conform to the level of the theory, analysis and interpretation of the data produces invalid results (Robinson, 1950, as cited in Klein et al., 1994).

In the statistical analysis stage of research, researchers also need to consider the choice of model. Theoretical models "describe relationships among constructs" (Kozlowski & Klein, p. 38). A multilevel perspective must pay special attention to the level of the constructs united within a theoretical model. There are three classes of models: single-level, cross-level, and homologous multilevel models.

Single-level models "describe the relationship among variables at one level of theory and analysis" such as the relationship among only individual-level constructs or only team-level constructs (Klein & Kozlowski, 2000, p. 218). Once the emergent constructs are raised to the unit level, the unit-level model is straightforward to test using common statistical methods such as correlation analysis and hierarchical regression according to the nature of construct relationships.

Cross-level models describe "the relationship among variables at different levels of analysis" (Klein & Kozlowski, 2000, p. 218). Three types of cross-level models are most common. A *cross-level direct effect model* suggests that "a predictor variable at one level of analysis influences an outcome variable at a different level of analysis" (p. 218). X (a unit-level independent variable) is related to Y (an individual-

level dependent variable). It is important to note that cross-level models of this type can only explain between-unit variability in individual-level outcome measures. X cannot explain within-unit variance in Y (Klein & Kozlowski, 2000).

Cross-level moderator models suggest that "variables at two different levels of analysis interact to predict an outcome at the lower level of analysis" (Klein & Kozlowski, 2000, p. 219). X (a unit-level independence variable) moderates the relationship between Y (an individual-level independent variable) and Z (an individual level dependent variable). That is, the strength of the Y-Z relationship varies between units.

Cross-level frog pond models describe "the effects of an individual group member's standing within a group on individual-level outcomes" (Klein & Kozlowski, 2000, p. 219). The model suggests that what matters is a frog's relative size, rather than the true or absolute size of a frog. The relationship between X (an individual-level independent variable) and Y (an individual-level dependent variable) is dependent on the average level of X within the unit. For example, the more an individual receives in bonus pay relative to the other members of his or her work group, the greater the individual's continuance commitment.

Homologous multilevel models specify that a relationship between two variables holds at more than one level of analysis. X (an individual-level independent variable) is related to Y (an individual-level dependent variable). And X (the same independent variable applied to the unit level) is related to Y (the same dependent variable applied to the unit level) (Klein & Kozlowski, 2000).

The model proposed in this study was a cross-level direct model. According to Klein and Kozlowski (2000), in cross-level models, an exogenous variable at one

level of analysis affects an endogenous variable at a different – typically lower – level of analysis (p. 218). In this study, organizational-level exogenous factors such as structure and internal communication influenced lower-level factors such as justice and relationships.

Lastly, I summarize the main statistical techniques of multilevel analysis. There are three procedures commonly used in multilevel data analysis. These procedures are within and between analysis (WABA), hierarchical linear modeling (HLM), and cross-level operator analysis (CLOP). The procedures differ in approach and focus. They answer different questions and are thus most appropriate to different types of multilevel models (Klein & Kozlowski, 2000).

Klein et al's (2000) comparison of WABA, CLOP and HLM highlights important differences among the techniques:

> WABA was designed to identify the appropriate level or levels to describe the relationships among the variables in a data set. In contrast, CLOP and HLM were designed to test cross-level models. Unlike WABA, neither CLOP nor HLM incorporates any decision rules to determine the appropriate level or levels at which the relationships should be described. (p. 528)

Thus, according to Klein et al. (2000), researchers using CLOP and HLM must use other procedures, such as r_{wg}, eta-squared, ICC(1), ICC(2), or WABA, to justify the aggregation of their measures to the unit level.

CLOP and HLM are similar analytical strategies. Both are well designed to test cross-level direct effect and moderating models. They answer the following questions: "What is the effect of a higher level unit characteristic on a lower level

outcome? And/or, what is the influence of a higher level unit characteristic on the relationship between lower level variables?" (Klein & Kozlowski, 2000, p. 230).

CLOP and HLM differ in that HLM allows one to model the non-independence or clustering present in the data, whereas CLOP does not. Thus, "in testing the effects of higher-level independent variables on a lower-level dependent variable, HLM and CLOP will yield very similar parameter estimates but different estimates of effect sizes, standard errors, and statistical significance" (Klein et al., 2000, p. 528).

In multilevel research, the level of model decides statistical analysis method. As I noted before, the model of this study was a cross-level model. I tested cross-level hypotheses (hypotheses 2-7s) using hierarchical linear modeling (HLM) because HLM seemed to be the most appropriate analytical method for this study. HLM provides the appropriate and most efficient estimation technique for cross-level models.

<div align="center">Research Design</div>

<div align="center">*Sampling*</div>

Despite the accepted superiority of probability sampling methods in survey research, nonprobability methods are often used instead, usually for situations in which probability sampling would be prohibitively expensive and/or when precise representativeness is not necessary (Babbie, 1990). This study adopted a nonprobability sampling method because of the demands of a multilevel analysis and the difficulty of random sampling at the organizational level.

The multilevel analysis of this study did require special considerations in sampling. Cross-level models typically need "within-unit homogeneity and between-

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unit variability on unit-level constructs" (Klein & Kozlowski, 2000, p. 221) and "within and between-unit variability" on individual-level constructs (Klein & Kozlowski, 2000, p. 221). In this study between-organization variability in the measures of two constructs – structure and internal communication – was essential to assess the effects of organizational differences. Data gathered from the survey should be homogeneous enough within each organization and, also, different enough from other organizations. Otherwise, findings would be inconclusive because of range restriction in the measures. Thus, I tried to sample diverse organizations in terms of organizational structure and internal communication.

Data were collected by conducting a survey of Korean corporations. To meet the criterion of HLM analysis, 31 organizations participated in the survey. Hofmann (1997) cited simulation results discussed in a working paper by Kreft (1996, as cited in Hofmann, 1997) noting that to have power of .90 to detect cross-level moderators, a sample of 30 groups with 30 individuals in each group or a sample of 150 groups with 5 people in each group is needed. Even though this study did not test cross-level moderation effects, I tried to satisfy the above sample size criterion. To encourage participation in the study, I promised participating organizations that they would receive a summary of the results when the study is completed.

In collecting data, the issue of single-source bias was addressed. According to P. Podsakoff, MacKenzie, Lee, and N. Podsakoff (2003), a method bias can occur when a respondent providing the measures of the predictor and criterion variable is the same person. For example, respondents try to maintain consistency in their responses to questions or they respond to items more as a result of their social acceptability than their true feelings. Because single sources inflate the correlation

among measures, it is not appropriate to have the same employees complete all measures in a single questionnaire at one time (Klein, Conn, Smith, & Sorra, 2001). To minimize single-source response bias, some of the participants completed the communication and structure items, which were delivered in questionnaire A (see Appendix A), and others completed the justice and relationship items, which were included in questionnaire B (see Appendix B).

Measures

Organizational Structure and Internal Communication

To measure organizational structure and internal communication, the IABC study questionnaire (L. Grunig et al., 2002) was adopted and used as the standardized set of questions with some modification. Some of internal communication items were slightly modified for better phrasing. Two additional items were developed for the asymmetrical communication variable because there were only three items in the original IABC questionnaire: In our company, management uses communication to control employees; Managers here are not interested in hearing employee suggestions regarding ways to improve company performance.

The IABC questionnaire used an open-ended fractionation scale that contains a true zero for the complete lack of a certain characteristic and 100 as an average amount for all items in the questionnaire, as experienced by a practitioner. The scale was unbounded on the upper end, allowing respondents to write as high a number as they desired. Use of this scale provided greater numerical accuracy and greater variety in the data. However, in this study, considering the relatively uncommon use of the fractionation scale, I changed it into a 7-point Likert-type scale for all items, anchored

by "strongly disagree" and "strongly agree" (See Appendix A for the English version of questionnaire A).

The construct of organizational structure of this study was composed of five variables (centralization, stratification, formalization, complexity, and participation in decision making). I combined these five variables into two general types of organizational structure, following J. Grunig (1992c). Organizations with *mechanical structures* are centralized, formalized, stratified, and less complex and do not allow employees to participate in decision making. Organizations with *organic structures* are less centralized, less formalized, less stratified, and more complex and facilitate participation in decision making.

Organizational structure items. The questions inquiring into *structure* were:

1. In our company, important decisions generally are made by a few top managers alone rather than by people throughout the company. (centralization)

2. Employees have a great deal of freedom in making decisions about our work without clearing those decisions with people at higher levels of the company (R). (centralization)

3. It is difficult for a person who begins in the lower ranks of our company to move up to an important supervisory position within about 10 years. (stratification)

4. In our company, there are clear and recognized differences between superiors and subordinates. These differences can be seen in larger offices, quality of office furniture, close-in parking spaces, or frequency of superiors and subordinates having lunch together. (stratification)

5. Our company has a printed company chart. (formalization)

6. Everyone in our company follows the company chart closely. (formalization)

7. Employees' actual work deviates from a written job description for our position (R). (formalization)

8. Employees must keep reading, learning, and studying almost every day to do our job adequately. (complexity)

9. In our company, employee education is needed to do our job adequately. (complexity)

10. Employees do not have personal influence on decisions and policies of our company (R). (participation in decision making)

11. Employees have a say in decisions that affect our jobs. (participation in decision making)

Internal communication items. The question items testing *asymmetrical communication* were:

1. The purpose of communication in our company is to get employees to behave in the way top management wants us to behave.

2. Most communication in our company is one-way: from management to other employees.

3. Employees seldom get feedback when we communicate to managers.

4. In our company, management uses communication to control employees.

5. Managers here are not interested in hearing employee suggestions regarding ways to improve company performance.

The questions reflecting *symmetrical communication* were:

1. Most communication between managers and other employees in our company can be said to be two-way communication.

2. Our company encourages differences of opinion.

3. The purpose of communication in our company is to help managers to be responsive to the problems of other employees.

4. Supervisors encourage employees to express differences of opinion.

5. Employees are usually informed about major changes in policy that affect our job before they take place.

6. Employees are not afraid to speak up during meetings with supervisors and managers.

Organizational Justice

For organizational justice, I originally planned to use measurement items used in Colquitt's (2001) study because I thought it provides the most comprehensive and credible justice measurement items. However, during the oral examination of my prospectus, the question of "sources of fairness" emerged – the overall organization or an employee's supervisor. Thus, after searching for more suitable measurement items that can answer the question of "sources of fairness," I adopted Rupp and Cropanzano's (2002) measurement items. In this section, first I present the issue of "sources of fairness" and provide the measurement items that I used in this study.

Organizational vs. supervisory justice. One path within justice research has sought to determine the sources of fairness. That is, to whom or to what are employees attributing acts of injustice? The current work in this area suggests that employees face at least two *sources* of justice (Rupp & Cropanzano, 2002), which is called *multifoci* justice. Th most obvious source is one's immediate supervisor or

manager. This supervisor has a direct line of authority over the employee. He or she can influence important outcomes, such as a pay raise or promotional opportunities.

Second, employees might also attribute unfairness to the organization as a whole. Although this second source is more subtle, it is also important. Individuals often think of their employing organizations as independent social actors capable of justice or injustice (Trevino & Bies, 1997). For example, organizations commonly form and often violate psychological contracts with workers (Cropanzano & Prehar, 2001; Robinson & Rousseau, 1994). Moreover, when employers violate these contracts, employees sometimes respond by withholding helpful citizenship behavior (Robinson & Rousseau, 1994). Likewise, as has been found in the research on workplace prejudice, employees distinguish between discrimination from the supervisor and discrimination from the organization as a whole (Ensher, Grant-Vallone, & Donaldson, 2001).

Perhaps most relevant to my study, social exchange relationships have proven especially useful for understanding multifoci justice. That is, just as individuals view themselves as having relationships with and obligations toward both their supervisors and their employing organization, several scholars have observed that justice perceptions can be made about the actions of both supervisors and organizations (Bishop & Scott, 2000; Bishop, Scott, & Burroughs, 2000).

Among organizational justice research, the findings of Ambrose et al. (2002) are of special importance. Ambrose et al. examined the causes and consequences of workplace sabotage. Interestingly, these researchers found that when an injustice came from a structural or organizational source, employees retaliated against the organization. However, when the injustice came from an individual, the response was

less specific. In this event, employees were likely to retaliate against either the person who created injustice or the organization as a whole.

Measurement items of multifoci justice. Byrne (1999, as cited in Rupp & Cropanzano, 2002) proposed a multifoci social exchange model. Byrne recast justice into four dimensions. Byrne maintained that supervisors could be sources of both interpersonal treatment and formal policies. Likewise, organizations can be characterized by their interpersonal climate, as well as by their formal policies. Thus, Byrne proposed that there were both two types of supervisory-focused justice (interactional and procedural) and two types of organizational-focused justice (interactional and procedural).

Rupp and Cropanzano (2002) tested Byrne's (1999) four-dimensional model of multifoci justice. By using Structural equation modeling (SEM), the researchers showed that the inclusion of supervisory-focused procedural justice, supervisory-focused interactional justice, organizational- focused procedural justice, and organizational-focused interactional justice was supported. Organizational- and supervisory-focused scales contain identical items with the exception that the organizational-focused items inquire about perceptions of organizational processes and relationships, while the supervisory-focused items inquire about perceptions of supervisory processes and relationships.

During the oral examination of my prospectus, committee members recommended that I use both sources of justice (organizational- and supervisory-focused justice) and examine the relationship between the two sources of justice, as well as associations between these two types of justice and other main variables of this study. Thus, I used four types of justice in this study. All items used a 7-point

Likert-type scale, anchored by "to a small extent" and "to a large extent" (see Appendix B).

Supervisory-focused justice items. The items included in *supervisory procedural justice* were:

1. I can count on my supervisor to have fair policies.

2. Where I work, my supervisor's procedures and guidelines are very fair.

3. My supervisor does not have any fair policies (R).

4. The procedures my supervisor uses to make decisions are not fair (R).

The items testing *supervisory interactional justice* were:

1. My supervisor keeps me informed of why things happen the way they do.

2. My supervisor's decisions are made out in the open so that everyone always knows what's going on.

3. My supervisor treats me with dignity and respect.

4. Whether the outcome is good or bad, I always feel like I am kept informed by my supervisor.

5. I feel my supervisor holds me in high regard.

6. My supervisor makes it clear to me that I am a valuable employee.

7. My supervisor does not care how I am doing.

Organizational-focused justice items. The items included in *organizational procedural justice* were:

1. This company's procedures and guidelines are very fair.

2. The procedures this company uses to make decisions are not fair (R).

3. I can count on this company to have fair policies.

4. We don't have any fair policies at this company (R).

The questions reflecting *organizational interactional justice* included:

1. This company makes it clear to me that I am a valuable employee.

2. I am kept informed, by this company, of why things happen the way they do.

3. Whether the outcome is good or bad, I always feel like I am kept informed by this company.

4. This company treats me with dignity and respect.

5. This company's decisions are made out in the open so that everyone always knows what's going on.

6. Whether right or wrong, this company always explains decisions to me.

7. I feel this company holds me in high regard.

8. This company doesn't care how I am doing.

Relationship Types and Outcomes

Lastly, to measure relationship types and outcomes, I used Hon and J. Grunig's (1999) items that have been found to be valid measures of relationships. In an effort to develop reliable and effective measures of relationships, Hon and J. Grunig (1999) launched a series of research projects on the relationship measurement issue. Once Hon and J. Grunig developed the six indicators of organizational relationships (two types of relationships and four outcomes of relationships), a research team at the University of Maryland tested the indicators through a study of publics' perception of their relationships with six American organizations. The research team conducted a quantitative study in which a sampled public was asked to answer, on a 1-to-5 scale, a series of agree/disagree statements pertaining to the indicators. They obtained useful quantifiable evidence of the perceptions that the

sampled public had of its relationships with the six organizations. The research results showed these scales to be good measures of public evaluations of their relationships with organizations, strong enough so that public relations professionals and researchers now can use these questions to measures evaluations of relationships in a survey. All items were 7-point Likert-type scales anchored by "strongly disagree" and "strongly agree" (see Appendix B for the English version of questionnaire B)

Relationship type items. The question items testing *exchange relationships* were:

1. Whenever this company gives or offers something to me, it generally expects something in return.

2. Even though I might have had a relationship with this company for a long time, it still expects something in return whenever it offers me a favor.

3. This company will compromise with me when it knows that it will gain something.

4. This company takes care of me because I am likely to reward the company.

The items included in *communal relationships* were:

1. This company does not especially enjoy giving me aid (R).

2. This company is very concerned about my welfare.

3. I feel that this company takes advantage of people who are vulnerable (R).

4. I think that this company succeeds by stepping on me (R).

5. This company helps me without expecting anything in return.

Relationship outcome items. The questions inquiring into *control mutuality* were:

1. This company and I are attentive to what each other say.

2. This company believes my opinions are legitimate.

3. In dealing with me, this company has a tendency to throw its weight around (R)

4. This company really listens to what I have to say.

5. The management of this company gives me enough say in the decision-making process.

The questions items testing *trust* were:

1. Whenever this company makes an important decision, I know it will be concerned about me.

2. This company can be relied on to keep its promises.

3. I believe that this company takes my opinions into account when making decisions.

4. I feel very confident about this company's skills.

5. This company does not have the ability to accomplish what it says it will do (R)

The items included in *commitment* were:

1. I feel that this company is trying to maintain a long-term commitment to me.

2. I can see that this company wants to maintain a relationship with me.

3. There is no long-lasting bond between this company and me.

4. Compared to other organizations, I value my relationship with this company more.

5. I would rather work together with this company than not.

The items testing *satisfaction* were:

1. I am happy with this company.

2. Both the organization and I benefit from the relationship.

3. I am not happy in my interactions with this company.

4. Generally speaking, I am pleased with the relationship this company has established with me.

5. I enjoy dealing with this company.

Survey Wording

Klein et al. (2001) showed that survey wording has considerable power in fostering within-group agreement and between-group variability. In their research, Klein et al. hypothesized that survey items that contain wording directing respondents' attention to their individual experiences (e.g., "I" or "my") may encourage respondents to look within, disregarding their observation of others' experiences. Conversely, survey items that contain wording directing respondents' attention to the common experiences of the group (e.g., "we" or "employees here") may "encourage respondents to assume the shared perspective of the group in completing survey items" (Klein et al., 2001, p. 6).

Klein et al.'s (2001) results indicated that use of a group referent reduces within-group variability in response to descriptive items but increases within-group variability in response to evaluative items. Items with a group reference showed greater between-group variability than items with an individual referent.

In my research, I considered the influence of survey wording. Each item of the structure and internal communication constructs were worded to encourage respondents to assume the shared perspective of the organization in completing

survey items. On the other hand, items in justice and relationships were worded to emphasize the individual experiences of respondents.

Translation

In translating the questionnaires, the back translation method was used (Zikmund, 1997). I asked Korean graduate students in the Department of Communication to help me in translating the questionnaires. Two Korean students participated in back translation. To ensure validity, one Korean student translated the questionnaires into Korean. The translated meanings were then back-translated into English by a second Korean student, working independently. The back-translation was accompanied without reference to the original English language (see Appendices C and D for Korean version of questionnaires).

Pretest

I conducted a pretest to examine the comprehensibility of the translated questionnaires and their capability of eliciting valid responses. The pretest was conducted on 10 employees in one participating company, where my sister worked as a computer programmer, on May 30, 2004. The pretest involved giving self-administered questionnaires to the participants, followed by an in-depth, on-site interview. Respondents were encouraged to identify ambiguous items and suggest necessary changes. The wording in the Korean version was refined as a result of the pretest.

Data Collection Procedure

Data collection was carried out from June 7 to August 31, 2004. To gain access to Korean companies, I mostly used my personal acquaintances. First, I contacted companies through the Korean Public Relations Practitioners Association.

My professional experience as a public relations practitioner in Korea enabled me to have personal relationships with many of these public relations practitioners in the association, which facilitated individual and group cooperation. Second, I also used my family connections to contact companies. My husband provided me access to several Korean organizations because he works for the Korean government as a senior director at the Department of Information and Technology. Several of his friends also work as financial executives in diverse industries. Third, many friends of mine helped me to get access to diverse types of companies because they work as professionals in many Korean companies.

One public relations practitioner in each company was a contact person who was asked to distribute questionnaires and follow-up messages several times encouraging non-respondents to reply. To show my appreciation to each contact person in each company, I enclosed small gifts such as lottery tickets or prepaid telephone cards.

Instructions in survey packets informed participants that the survey was part of a study to learn more about organizations, how they work, and how employees feel about their workplaces. Each survey packet began with instructions followed by several instruments to assess organizational structure and internal communication of each company (questionnaire A) or participants' perceptions of organizational fairness and relationships with their companies (questionnaire B). Finally, demographic questions such as gender, age, education level, and years of job experience were asked. Each packet also included a stamped envelope so that participants could mail their completed questionnaires back directly to my home in Korea.

Data Analysis

Exploratory Factor analysis and Cronbach's Alpha Test

I began the analysis of the hypothesized relationships among the main variables by conducting preliminary statistical analyses. To assess the reliability and internal consistency of the data, the Cronbach's alpha test was performed. Because some of the measurement items were modified or newly developed (e.g., internal communication), the scale reliabilities from previous studies were not generalizable to this study. I also conducted exploratory factor analysis, especially principal component analysis (PCA), to determine how well the items actually measured the latent variables they were designed to measure.

Justifying Data Aggregation

Multilevel research requires special statistical procedures to analyze the data (Klein & Kozlowski, 2000). One of those procedures is to justify the aggregation of individual-level data. Thus, I justified aggregation statistically by using r_{wg}, ICC(1), and ICC(2) to ensure that there was high degree of agreement within each organization on organizational-level variables (James, Demaree, & Wolf, 1984). The r_{wg} is an index of the agreement or consensus across perceivers in a common setting. The r_{wg} is calculated by comparing an observed group variance to an expected random variance. It provides a measure of agreement for each group rather than an omnibus measure for the groups as a whole. Generally, r_{wg} of .70 or higher is acceptable.

In addition to within-group consistency, between-group analysis using ICC was conducted (Bliese, 2000). I calculated the ICC(1) to look at how much of the variance in the dependent variable is due to group membership and the ICC(2) to examine the reliability of group means. ICC(1) assesses between-unit variance

relative to total variance. It is based on eta-squared, but controls for the number of predictors relative to the total sample size, so it is not biased by unit size. Its statistical significance is based on the F-test. ICC(2) assesses the reliability of the unit means in a sample, based on ICC (1) and unit size. ICC (2) values of .70 or higher are acceptable.

Multicollinearity Test

In analyzing data, the issue of multicollinearity was also addressed. Multicollinearity refers to "strong linear relationship between two or more of the predictors" (Lomax, 2001, p. 62). I used the variance inflation factor (VIF) method to check multicollinearity. VIF is a statistical method for detecting multicollinearity. It is defined as "the inflation that occurs for each regression coefficient above the ideal situation of uncorrelated predictors" (Lomax, 2001, p. 63). Wetherill (1986) suggested that the largest VIF should be less than 10 in order to satisfy this assumption.

Tests of Hypotheses

Correlation and regression tests. I used correlations and regressions to test hypothesis 1 because the first hypothesis was about same-level variables (organizational-level). In case of single-level models, once the emergent constructs are raised to the unit level, the unit-level model is straightforward to test using common statistical methods such as correlation analysis and hierarchical regression according to the nature of construct relationships (Kozlowski & Klein, 2000).

HLM test. With respect to the rest of the hypotheses, I conducted HLM tests. HLM is a type of random coefficient model and is specifically designed to accommodate nested or multilevel data structure. HLM is especially appropriate in assessing the extent to which unit-level independent variables explain between unit

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variance in the dependent variables, which is the main purpose of this study. Even though hypothesis 2 and 5 were about same-level variables (individual-level), those hypotheses could be appropriately analyzed using the random-coefficient regression model of HLM, which is the second step in conducting HLM tests. HLM analysis in this study was composed of two stages because there were two dependent constructs – organizational justice (mediator) and organizational relationship. Also, I included two control variables – size (organizational-level) and tenure in company (individual-level) in HLM analyses.

Mediation test. To test the subhypotheses of 6 about the mediating effect of justice between organizational-level predictor variables and individual-level outcome variables, I followed the recommendations of Kenny, Kashy, and Bolger (1998). According to Kenny and his colleagues, a variable (M) mediates the relationship between an antecedent variable (X) and an outcome variable (Y) if: (1) X is significantly related to Y in the absence of M; (2) X is significantly related to M; (3) M is significantly related to Y; and (4) after controlling for M, the X-Y relationship is zero.

<center>Ethical Considerations</center>

According to Bogdan and Biklen (1998), there are two dominant ethical issues in research on human participants: obtaining informed consent and protection of participants from harm. J. Grunig and L. Grunig (2000) also explained that consent, deception, and privacy are three major aspects of ethics in public relations research. They argued that ethics of research is a critical concern because of a growing reluctance to cooperate in research projects. To maintain public confidence in research, ethical issues should be addressed.

At the outset of the study, I contacted organizations via a letter that indicates my identity as a researcher and explained the purpose of the study. I also explained the methods and time commitment of participants necessary for the research. Issues of anonymity and potential benefits the organizations would get from participating in this research were addressed.

For participants of my study, as requested by the Human Subjects Committee of the Department of Communication at the University of Maryland, I prepared informed consent forms, which delineated the nature of the study, whom participants can contact for further information, procedures used, and how I plan to use results of the study. Employees were not forced in any way to participate in the study. All participation was voluntary. The potential risks and benefits were explained to potential participants before they participated in the survey. Participation in this research was not anticipated to put participants at perceived risk. However, participants were reminded that they had the right to ask questions, withdraw from participation at any time without penalty and/or decline to answer certain questions. Following their participation, participants were fully debriefed about the underlying rationale of the research and any reactions they might have about the research materials were addressed.

Participants' responses were anonymous. First, consent forms were collected separately from the questionnaires so that no one would be able to associate participant identities with data. Each contact person in each company collected consent forms, and all responses were mailed directly to me so that no one in the organization knew how participants responded. Second, the questionnaire did not ask for any specific identifying information about the participants. Only the sex, age,

education level, and work experience of the respondents were reported to identify participants. The only people with access to the data and consent forms collected were my advisor and me. The completed research materials are kept in my locked office. Five years after any publication resulting from the research, the complete research materials will be shredded.

In writing up results, I took caution not to provide any information that could directly lead to identification of the organizations because the organizations asked for complete confidentiality. Also, I provided an executive summary of research for each organization. A copy of my dissertation also will be given to each organization. If a participant requests results of the research, I will provide him/her with an executive summary.

CHAPTER IV

RESULTS AND DISCUSSION

Descriptions of Samples

In this study, 31 companies participated. During the survey stage, I distributed 20 questionnaire A's (measuring organizational-level independent variables) and 60 questionnaire B's (measuring individual-level dependent variables) to each participating company. In total, 620 questionnaire A's and 1,860 questionnaire B's were distributed. Returned questionnaires totaled 301 for the questionnaire A and 907 for the questionnaire B.

After an initial examination of the returned questionnaires, five questionnaire A's and 12 questionnaire B's were deemed unusable,[4] which left 296 usable questionnaire A's and 895 usable questionnaire B's. Response rate was 48 %. The response rate was close to the benchmark of 50%, which was regarded as desirable by Babbie (1990). On average, 9.5 employees answered the questionnaire A and 28.9 employees answered the questionnaire B in each company. Table 1 shows descriptions of participating companies. Companies were diverse in industry category and size.

Even though samples were selected with unequal probability from each company, as shown in Table 1, I decided not to give different weightings to the companies. It is because only several big companies (e.g., companies 15, 16, and 22) would have dominated the whole sample if I had given different weightings to the companies. As a result, the outcomes of this study would have mainly represented

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[4] These questionnaires were mostly incomplete ones. Some respondents answered only half of the questionnaires. Some questionnaires were discarded because respondents answered the questionnaires using only one scale (e.g. all items were marked on 4's).

Table 1

Descriptions of Participating Organizations

Company No.	Industry Category	No. of employees	No. of participants (Questionnaire A)	No. of participants (Questionnaire B)
1	Marketing Consulting	210	9	29
2	Amusement park	420	11	30
3	Home security service	490	10	30
4	Publishing	420	10	29
5	Advertising	730	10	28
6	Food manufacturing	890	10	30
7	Beverage manufacturing	870	10	27
8	Plastic product manufacturing	200	10	29
9	Chemical manufacturing	1,100	9	29
10	Electronic products manufacturing	590	10	30

(table contines)

Table 1 *(continued)*

Company No.	Industry Category	No. of employees	No. of participants (Questionnaire A)	No. of participants (Questionnaire B)
11	Computer equipment manufacturing	420	10	29
12	Transportation	730	10	31
13	Electronic equipment manufacturing	1,070	9	30
14	Electrical equipment manufacturing	320	11	31
15	Computer manufacturing	3,500	9	21
16	Telecommunication carrier	5,500	11	29
17	Computer software development	250	14	32
18	Internet portal service	350	10	26
19	Newspaper publisher	300	6	34

(table continues)

Table 1 *(continued)*

Company No.	Industry Category	No. of employees	No. of participants (Questionnaire A)	No. of participants (Questionnaire B)
20	Department Store	1,200	9	21
21	Computer Network Service	1,150	10	30
22	Banking	8,500	9	29
23	Reinsurance	240	7	32
24	Credit card	1,800	8	23
25	Petroleum refining	2,600	10	28
26	Computer software development	250	9	27
27	Computer system design	570	15	48
28	Wholesale trade	2,300	7	21
29	Financial investments	420	10	26
30	Financial consulting	300	6	26
31	Research institute	110	7	30
Total			296	895

Table 2

Descriptions of Samples (Participants in Questionnaire A)

Company No.	Gender (Frequency)		Education level (Frequency)			Age (*Mean*)	Tenure in organization (*Mean*)
	Male	Female	High school diploma	College diploma	Master's or PhD degree		
1	8	1	2	6	1	37.00	9.33
2	9	2	2	6	3	39.27	11.91
3	7	3	2	7	1	39.50	12.60
4	9	0	2	7	0	44.00	19.11
5	2	8	1	7	2	35.40	12.20
6	8	2	1	7	2	41.00	16.90
7	1	9	1	8	1	34.40	10.20
8	7	3	0	8	2	32.30	4.30
9	4	5	2	7	0	37.89	12.89
10	7	3	4	6	0	38.20	14.50
11	7	3	3	7	0	38.30	10.30
12	8	2	3	7	0	40.30	14.70
13	7	1	0	7	1	37.75	13.63
14	9	2	1	10	0	37.55	11.77
15	9	0	0	9	0	29.11	4.00
16	7	4	0	8	3	32.09	6.55
17	11	3	0	12	2	29.29	3.21
18	6	4	0	10	0	29.60	2.40

(table continues)

Table 2 *(continued)*

Company No.	Gender (Frequency)		Education level (Frequency)			Age (*Mean*)	Tenure in organizations (*Mean*)
	Male	Female	High school diploma	College diploma	Master's or PhD degree		
19	4	2	0	6	0	28.33	3.67
20	3	6	0	9	0	27.33	3.67
21	7	3	0	10	0	28.78	4.00
22	7	2	0	8	1	36.78	12.11
23	6	1	0	6	1	28.43	2.79
24	4	4	0	5	3	30.00	2.63
25	9	1	0	8	1	34.80	8.80
26	5	4	2	6	1	28.67	2.38
27	9	6	2	11	0	28.69	2.17
28	6	1	0	6	1	29.29	4.43
29	6	4	0	10	0	32.00	2.00
30	6	0	0	2	4	38.83	3.80
31	7	0	0	2	4	36.67	6.00
Sub Total	206	88	28	228	34	*M* 34.27 (*SD*:6.45)	*M* 8.21 (*SD*:6.62)
Missing Data	2		6			8	10
Total	296		296				

Table 3

Descriptions of Samples (Participants in Questionnaire B)

Company No.	Gender (Frequency)		Education level (Frequency)			Age (*Mean*)	Tenure in organization (*Mean*)
	Male	Female	High school diploma	College diploma	Master's or PhD degree		
1	24	5	4	24	1	36.41	10.00
2	23	7	5	22	3	35.40	11.26
3	13	17	3	21	6	36.13	10.97
4	18	11	6	23	0	37.28	14.17
5	19	8	9	16	2	40.07	14.63
6	22	8	0	28	2	41.60	17.47
7	17	10	3	21	3	39.59	13.30
8	20	9	1	20	8	34.03	2.65
9	22	7	2	25	2	39.48	12.79
10	17	13	15	15	0	38.36	12.32
11	21	7	7	20	0	35.48	9.48
12	22	9	9	22	0	40.29	15.48
13	25	4	1	23	4	39.86	13.71
14	21	9	11	16	1	36.86	11.15
15	16	5	1	20	0	29.52	5.76
16	23	6	0	14	15	32.45	5.76
17	12	20	0	22	10	30.56	5.06
18	14	12	0	22	4	29.08	2.38

(table continues)

Table 3 *(continued)*

Company No.	Gender (Frequency)		Education level (Frequency)			Age (*Mean*)	Tenure in organization (*Mean*)
	Male	Female	High school diploma	College diploma	Master's or PhD degree		
19	20	14	0	26	8	31.29	3.66
20	13	7	2	17	1	28.26	3.95
21	22	8	0	25	5	29.87	4.24
22	15	14	2	25	2	30.83	6.75
23	24	8	2	24	6	27.25	2.31
24	0	21	5	11	0	25.86	2.07
25	21	7	0	20	8	32.11	5.85
26	16	10	1	23	2	28.35	2.46
27	20	28	6	42	0	27.61	2.86
28	12	9	1	14	6	28.90	2.68
29	20	2	2	18	2	30.20	2.70
30	22	4	0	20	4	32.46	3.17
31	28	2	0	22	7	31.52	4.21
Sub Total	582	300	98	661	111	*M* 33.63 (*SD* 6.82)	*M* 7.68 (*SD* 6.73)
Missing data	13		25			27	30
Total	895		895				

those several big companies' characteristics (K. Klein, personal communication, October 12, 2004). My purpose in this study was to examine how different types of organizational structure and internal communication are related to justice and employee-organization relationships. I thought, in this study, it was crucial to represent diverse types of structures and communication systems as well as various degrees of justice and relationship outcomes. Thus, I chose to give the same weight to each company. However, I addressed the issue of different company sizes by including size as an organizational-level control variable.

Table 2 summarizes demographic information from participants in questionnaire A, and Table 3 summarizes demographic information from participants in questionnaire B. The participants provided information about various demographic characteristics. Some participants were reluctant to give out some of the demographic information, thus demographic variables had missing data. Seventy five percent of participants held a bachelor's degree. Thirty percent of the participants were female and seventy percent were male. Participants were 34 years old and had 8 years of tenure in their companies on average.

Results of Exploratory Factor Analysis and Reliability Test

I began the analysis of the hypothesized relationships among main variables by conducting preliminary statistical analyses. To assess the reliability and internal consistency of the data, Cronbach's alpha test was performed. Because some of the measurement items were newly developed or modified (e.g., internal communication), the scale reliabilities from previous studies were not generalizable to this study. I also conducted exploratory factor analysis, in particular principal component analysis

(PCA), to determine how well the items actually measured the latent variables they were designed to measure.

Both of these tests were conducted with the individual-level data using the SPSS 11.5 program. The influence of group membership (i.e., company membership) was controlled because the group membership might have affected relationships among variables. To control for group membership, I first calculated partial correlations for each variable using company identity as a dummy variable. Based on the partial correlations, the exploratory factor analysis and reliability test were conducted for all the variables of this study.

All measurement scales showed acceptable alpha coefficients. Also, for most of the measures, items revealed significant factor loadings and the pattern of eigenvalues suggested that a one-factor solution would best fit the data. There was a case where more than one factor was obtained (e.g., structure). Because I was interested in obtaining the strongest single indicator for each latent variable, only the first factor in the factor analysis was selected for all further analysis. For each measure, I retained those items that loaded higher than .50 on a single factor. This meant that the items shared at least 25% of the variance with the factor. This section presents the items used in the questionnaires. Also, the results of exploratory factor analysis and reliability test for the items are presented.

Internal Communication

The results of the factor analysis and Cronbach's reliability test for internal communication variables are reported in Table 4. All items in each of the asymmetrical communication and symmetrical communication variables loaded

Table 4

Items, Factor Loadings, and Reliability for Internal Communication (n = 296)

Variable	Item	Factor loading	Alpha
Symmetrical Communication	Most communication between managers and other employees in our company can be said to be two-way communication.	.74	
	Our company encourages differences of opinion.	.80	
	The purpose of communication in our company is to help managers to be responsive to the problems of other employees.	.71	
	Supervisors encourage employees to express differences of opinion.	.79	
	Employees are usually informed about major changes in policy that affect our job before they take place.	.70	
	Employees are not afraid to speak up during meetings with supervisors and managers.	.66	.83
Eigenvalue		3.27	
% of Variance Explained		54.49	

(table continues)

Table 4 *(continued)*

Variable	Item	Factor loading	Alpha
	The purpose of communication in our company is to get employees to behave in the way top management wants us to behave.	.75	
	Most communication in our company is one-way: from management to other employees.	.80	
Asymmetrical Communication	Employees seldom get feedback when we communicate to managers.	.73	
	In our company, management uses communication to control employees.	.78	
	Managers here are not interested in hearing employee suggestions regarding ways to improve company performance.	.68	.80
Eigenvalue		2.81	
% of Variance Explained		56.26	

strongly on one factor, respectively. Asymmetrical communication explained 56.25 % of the variance and symmetrical communication explained 54.49 % of the variance. Cronbach's alpha was .80 for asymmetrical communication and .83 for symmetrical communication.

With respect to the construct of internal communication, it was possible to develop a continuum of asymmetrical-symmetrical communication. However, when I conducted the exploratory factor analysis after combining all internal communication items, I found that two factors were extracted. Those two factors clearly represented asymmetrical communication and symmetrical communication respectively. Also, Pearson's correlation r between asymmetrical communication and symmetrical communication (which will be presented later in the descriptive analysis part) was -.45 at the individual level and -.68 at the organizational level. These correlation coefficients indicated that the two types of communication are significantly related but not at a high enough level to suggest that they are the same construct. I thought the two communication variables are to some degree independent from each other. Thus, I treated asymmetrical communication and symmetrical communication as distinct variables for all further analysis.

This result is consistent with Rhee's (1999) finding. In her master's thesis on Confucian culture and excellent public relations in South Korea, Rhee also separated the continuum of communication into two separate scales: asymmetrical and symmetrical communication. Further research is needed because this result might be due to South Korea's unique socio-cultural contexts.

On the other hand, another possibility has to be considered: Communication itself really has different dimensions. Thus, it is possible for organizations to have

both asymmetrical and symmetrical internal communication systems at the same time and employees consider some aspects of their internal communication are symmetrical and other aspects are asymmetrical.

Organizations can have the symmetrical communication system in some functions, for example in the business-focused internal communication, and the asymmetrical communication system in other functions, for example in the relationship-focused internal communication between management and employees. Thus, management would try to use dialogue, negotiation and listening when working on clients' projects to be more efficient and effective. On the other hand, in the other parts of internal communication, management would use persuasion and give orders to employees to control the behavior of the employees in ways that management desires. This result supports Clampitt and Downs' (1993) argument that internal communication is a multidimensional construct and that employees express varying degrees of satisfaction about aspects of communication.

Structure

Table 5 reports the results of the exploratory factor analysis and reliability analysis for 11 items used to measure five structural variables – centralization, stratification, formalization, complexity, and participation in decision making. Three items measured formalization and two items measured each of the other four concepts. Based on the literature review of organizational structure, I planned to combine these five variables into two general types of organizational structure. Organizations with *mechanical structures* were centralized, formalized, stratified, and less complex and do not allow employees to participate in decision making. Organizations with *organic structures* were less

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Table 5

Items, Factor Loadings, and Reliability for Structure (n = 296)

Variable	Item	Factor loading 1	Factor loading 2	Alpha
Centralization	In our company, important decisions generally are made by a few top managers alone rather than by people throughout the company. (R)	.57	.14	
	Employees have a great deal of freedom in making decisions about our work without clearing those decisions with people at higher levels of the company.	.56	-.03	
Stratification	It is difficult for a person who begins in the lower ranks of our company to move up to an important supervisory position within about 10 years. (R)	.52	.35	
	In our company, there are clear and recognized differences between superiors and subordinates. These differences can be seen in larger offices, quality of office furniture, close-in parking spaces, or frequency of superiors and subordinates having lunch together. (R)	.57	.32	

(table continues)

Table 5 *(continued)*

Variable	Item	Factor loading 1	2	Alpha
Formalization	Our company has a printed company chart. (R)	.21	.63	
	Everyone in our company follows the company chart closely. (R)	.12	.75	
	Employees' actual work deviates from a written job description for our position. (R)	.05	.70	
Complexity	Employees must keep reading, learning, and studying almost every day to do our job adequately.	.58	.28	
	In our company, employee education is needed to do our job adequately.	.60	.20	
Participation	Employees do not have personal influence on decisions and policies of our company (R)	.63	-.19	
	Employees have a say in decisions that affect our jobs.	.59	-.08	.67
Eigenvalues		3.32	1.86	
% of Variance Explained		29.73	16.86	

Note: (R) means the items were reverse-scored to be combined as a single scale in which a high score indicated an organic structure and a low score a mechanical structure.

centralized, less formalized, less stratified, and more complex and facilitate participation in decision making.

In the same way that L. Grunig et al. (2002) did, I tried to combine "first for each of the five concepts and then as a single scale in which a high score indicated an organic structure and a low score a mechanical structure" (p. 503). Because a high score represents an organic structure, the first item in centralization and all items measuring stratification and formalization were reversed. Low centralization, stratification, and formalization characterized an organic organization. I could improve the reliability of the final scale and simplify data analysis by combining structural items into a single scale rather than putting them into separate organic and mechanical scales (L. Grunig et al., 2002).

All 11 items were put into a factor analysis, and two factors were extracted. Items for centralization, stratification, complexity, and participation in decision making loaded most highly on the first factor (eigenvalue was 3.32 with 29.73 % of the variance explained). All formalization items loaded most highly on the second factor (eigenvale was 1.86 with 16.86 % of the variance explained). Because my purpose was to obtain the strongest single indicator for the variable of structure, only the first factor was selected for all further analysis. Thus, in my further analysis, the eight-item factor was used and *organic structures* designated the structures that are less centralized, less stratified, and more complex and facilitate participation in decision making. Cronbach's alpha has improved from .67 to .71 after removing the items for formalization, which showed that the internal consistency of the structure variable has been enhanced.

This result is somewhat consistent with L. Grunig et al.'s (2002) finding. In L. Grunig et al.'s study on "inside the organization,"[5] the results indicated that the correlations with formalization deviated from the pattern of other structural variables. Formalization did not correlate significantly with symmetrical communication or satisfaction with organizations. Also, the correlations of formalization with other structural variables were very low ($r = -.10$ and $.21$). Thus, I suspect that formalization is a less effective measure than other structural variables in measuring organizational structure.

However, it is also possible that this result might be due to South Korea's unique social contexts and cultural norms. Formalization represents "the importance of rules and the degree to which they are enforced in the organization" (L. Grunig et al., 2002, p. 485). Many Korean organizations emphasize the importance of rules (Yoon, 2001). People usually think there should be rules in organizations and that the rules should be enforced in the organizations. Thus, Korean organizations tend to be formalized whether they are big or small, or whether they are new or old. Therefore, it is likely that formalization exists in organic organizations as well as in mechanical organizations. I reason that this unique aspect of Korean organizations might have influenced the factor of organizational structure.

Justice

The results of the factor analysis and Cronbach's reliability test for the supervisory-focused justice and organizational-focused justice variables are reported in Table 6 and Table 7. In this study, I used two types (procedural and interactional)

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[5] L. Grunig et al. (2002) showed that organic structure and symmetrical communication interact to produce a participative culture, and participative culture contributes strongly to employee satisfaction with the organization.

Table 6

Items, Factor Loadings, and Reliability for Supervisory Justice after Combining

Procedural Justice and Interactional Justice (n = 895)

	Factor	
Item	loading	Alpha
I can count on my supervisor to have fair policies.	.84	
Where I work, my supervisor's procedures and guidelines are very fair.	.86	
My supervisor does not have any fair policies. (R)	.80	
The procedures my supervisor uses to make decisions are not fair. (R)	.81	
My supervisor keeps me informed of why things happen the way they do.	.74	
My supervisor's decisions are made out in the open so that everyone always knows what's going on.	.72	
My supervisor treats me with dignity and respect.	.81	
Whether the outcome is good or bad, I always feel like I am kept informed by my supervisor.	.78	
I feel my supervisor holds me in high regard.	.80	
My supervisor makes it clear to me that I am a valuable employee.	.81	
My supervisor does not care how I am doing. (R)	.73	.94
Eigenvalue	6.89	
% of Variance Explained	62.68	

Table 7

Items, Factor Loadings, and Reliability for Organizational Justice After Combining

Procedural Justice and Interactional Justice (n = 895)

Item	Factor loading	Alpha
This company's procedures and guidelines are very fair.	.82	
The procedures this company uses to make decisions are not fair. (R)	.78	
I can count on this company to have fair policies.	.83	
We don't have any fair policies at this company. (R)	.72	
This company makes it clear to me that I am a valuable employee.	.80	
I am kept informed, by this company, of why things happen the way they do.	.81	
Whether the outcome is good or bad, I always feel like I am kept informed by this company.	.80	
This company treats me with dignity and respect.	.82	
This company's decisions are made out in the open so that everyone always knows what's going on.	.80	
Whether right or wrong, this company always explains decisions to me.	.77	
I feel this company holds me in high regard.	.79	
This company does not care how I am doing. (R)	.71	.94
Eigenvalue	7.45	
% of Variance Explained	62.08	

of supervisory-focused justice and two types (procedural and interactional) of organizational-focused justice following Byrne (1999) and Rupp and Cropanzano (2002).

Even though the distinction between procedural justice and interactional justice was conceptually appropriate, the results of factor analysis showed that procedural justice and interactional justice actually measured the same latent variable (see Table 6 and 7). Thus, my initial effort to distinguish interactional justice from procedural justice proved to be in vain.

There has been a debate about the status of interactional justice. Some researchers have treated it as a component of procedural justice and others have treated it as a distinct form of justice. This result supports the proposition of Tyler and Blader (2000) and Tyler and Lind (1992) that interactional justice is a component of procedural justice.

All items of each justice variable loaded strongly on one factor, respectively. Supervisory justice explained 62.68 % of the variance and organizational justice explained 62.08 % of the variance. Cronbach's alpha was .94 for both types of justice.

I also investigated whether the supervisory-focused justice and organizational-focused justice items could be combined. In this case, the result showed that a two-factor solution best fit the data. This means the participants differentiated the sources of fairness. They attributed fairness to their immediate supervisor and to the organization distinguishably. This result supports Rupp and Cropanzano's (2002) argument that employees attribute fairness to the organization as a whole as well as to their direct supervisors.

Thus, with respect to the justice construct, I used two distinct variables for further analysis – supervisory-focused justice and organizational-focused justice. I used the terms of supervisory justice and organizational justice to refer to supervisory-focused justice and organizational-focused justice in the rest of the study for brevity.

Relationship Types

The results of the factor analysis and Cronbach's reliability test for relationship type variables are reported in Tables 8 and 9. All items for both an exchange relationship and a communal relationship loaded strongly on one factor, respectively. Exchange relationship explained 74.83 % of the variance and communal relationship explained 72.85 % of the variance. Cronbach's alpha was high for both indexes and approached the ideal level of .90 (.89 for exchange relationship and .90 for communal relationship).

Relationship Outcomes

The results of the factor analysis and Cronbach's reliability test for relationship outcome variables are given in Tables 9 – 13. All items of each of four types of relationship outcome loaded strongly on one factor, respectively. The percentage of variance explained was 62.49% for control mutuality; 63.88% for trust; 63.45% for commitment; and 71.55% for satisfaction. Cronbach's alpha was .84 for control mutuality; .86 for trust; .85 for commitment; and .90 for satisfaction.

In summary, the exploratory factor analysis helped identify the items that form scales for the variables of interest in this study and Cronbach's reliability test showed that all measurement items in this study were internally consistent and reliable.

Table 8

Items, Factor Loadings, and Reliability for Exchange Relationship (n = 895)

Item	Factor loading	Alpha
Whenever this company gives or offers something to me, it generally expects something in return.	.83	
Even though I might have had a relationship with this company for a long time, it still expects something in return whenever it offers me a favor.	.88	
This company will compromise with me when it knows that it will gain something.	.90	
This company takes care of me because I am likely to reward the company.	.85	.89
Eigenvalue	2.99	
% of Variance Explained	74.83	

Table 9

Items, Factor Loadings, and Reliability for Communal Relationship (n = 895)

Item	Factor loading	Alpha
This company does not especially enjoy giving me aid. (R)	.83	
This company is very concerned about my welfare.	.87	
I feel that this company takes advantage of people who are vulnerable. (R)	.86	
I think that this company succeeds by stepping on me. (R)	.87	
This company helps me without expecting anything in return.	.84	.90
Eigenvalue	3.64	
% of Variance Explained	72.85	

Table 10

Items, Factor Loadings, and Reliability for Control Mutuality (n = 895)

Item	Factor loading	Alpha
This company and I are attentive to what each other say.	.84	
This company believes my opinions are legitimate.	.83	
In dealing with me, this company has a tendency to throw its weight around. (R)	.65	
This company really listens to what I have to say.	.82	
The management of this company gives me enough say in the decision-making process.	.79	.84
Eigenvalue	3.12	
% of Variance Explained	62.49	

Table 11

Items, Factor Loadings, and Reliability for Trust (n = 895)

Item	Factor loading	Alpha
Whenever this company makes an important decision, I know it will be concerned about me.	.78	
This company can be relied on to keep its promises.	.81	
I believe that this company takes my opinions into account when making decisions.	.81	
I feel very confident about this company's skills.	.82	
This company does not have the ability to accomplish what it says it will do. (R)	.78	.86
Eigenvalue	3.19	
% of Variance Explained	63.88	

Table 12

Items, Factor Loadings, and Reliability for Commitment (n = 895)

Item	Factor loading	Alpha
I feel that this company is trying to maintain a long-term commitment to me.	.82	
I can see that this company wants to maintain a relationship with me.	.82	
There is no long-lasting bond between this company and me. (R)	.77	
Compared to other organizations, I value my relationship with this company more.	.80	
I would rather work together with this company than not.	.77	.85
Eigenvalue	3.17	
% of Variance Explained	63.45	

Table 13

Items, Factor Loadings, and Reliability for Control Mutuality (n = 895)

Item	Factor loading	Alpha
I am happy with this company.	.88	
Both the organization and I benefit from the relationship.	.82	
I am not happy in my interactions with this company. (R)	.84	
Generally speaking, I am pleased with the relationship this company has established with me.	.84	
This company and I are attentive to what each other say.	.86	.90
Eigenvalue	3.58	
% of Variance Explained	71.55	

Justifying Aggregation of Organizational-Level Variables

Multilevel research requires special statistical procedures to analyze the data (Klein & Kozlowski, 2000). One of those procedures is conducted to justify the aggregation of individual-level data. This is a necessary prerequisite for composing the individual-level responses to higher-level constructs.

In the method section, I argued that organizational structure and internal communication are shared unit constructs. I reasoned that employees might respond to the two constructs in sufficiently similar ways because all of them are living under the influence of the same structure and internal communication. According to Klein and Kozlowski (2000), when assessing shared unit constructs, researchers must demonstrate substantial within-group agreement before using the mean of unit members' scores to represent the unit. Thus, before organizational-level independent variables could be aggregated to represent each company, I needed to statistically justify aggregation by ensuring that there was a high degree of agreement within each organization on these variables (James, Demaree, & Wolf, 1984).

Within-Group Interrater Agreement (r_{wg})

First, within-group consistency was assessed with r_{wg}. The r_{wg} is an index of the agreement or consensus across perceivers in a common setting. The r_{wg} is calculated by comparing an observed group variance to an expected random variance. It provides a measure of agreement for each group rather than an omnibus measure for the groups as a whole. The values of r_{wg} vary between 0 and 1 with a high value indicating agreement among raters and a low value indicating a lack of agreement among raters. Generally, an r_{wg} of .70 or higher is acceptable (Klein & Kozlowski, 2000).

For J parallel items assessing a variable, the r_{wg} is given by the following

equation (James, Demaree, & Wolf, 1993):

$$r_{wg}(J) = J[1 - (Sx_j^2/\sigma_E^2)] / J[1 - (Sx_j^2/\sigma_E^2)] + (Sx_j^2/\sigma_E^2)$$

where

$r_{wg}(J)$ is the within-group interrater agreement

Sx_j^2 is the mean of the observed variance on the J parallel items

σ_E^2 is the variance on x_j that would be expected if all judgments were due excessively

to random measurement error, where $\sigma_E^2 = (A^2 - 1) / 12$ (A is the number of

alternatives in the response scale for the item x_j which is presumed to vary from 1 to

A)

The r_{wg} indices for independent variables are given in Table 14. The r_{wg}

indices were sufficiently large to justify aggregation.

Table 14

Within-Group Interrater Agreement (r_{wg}) of Independent Variables

Variable	No. of items	Minimum r_{wg}	Maximum r_{wg}	Average r_{wg}
Structure	8	0.83	0.97	0.89
Asymmetrical Communication	5	0.74	0.97	0.79
Symmetrical Communication	6	0.69	0.95	0.87

Intraclass Correlation Coefficients (ICCs)

In addition to within-group consistency, a between-group analysis using intraclass correlation coefficients (ICCs) was conducted (Bliese, 2000). I calculated the ICC(1) to look at how much of the variance in the variables is due to group membership and calculated the ICC(2) to examine the reliability of group means.

ICC can be estimated using HLM (see Hofmann, 1997, pp. 732-733). Unfortunately, however, "the methodology is limited in that the variance in the independent variables and in moderators cannot be partitioned and evaluated in HLM" (Castro, 2002, p. 78). Thus, both forms of the ICC for independent variables in this study were calculated from a one-way random-effects ANOVA (analysis of variance) where the variable of interest is the dependent variable and group membership is the independent variable.

Mathematically, the ratio of between-group variance to total variance is calculated in order to estimate the ICC(1). From a one-way random-effect ANOVA model, ICC(1) can be calculated with the Bartko (1976) formula (Hofmann et al., 2000):

$$ICC(1) = MSB - MSW / MSB + [(k-1) * MSW]$$

where

MSB is the between-group mean square

MSW is the within-group mean square

k is the group size (In most cases one can use average group size for k if group sizes differ. In this research, I used the average number of participants in questionnaire A, which was 9.5 people)

One important difference between the ICC(1) calculated from a HLM model and the ICC(1) calculated from an ANOVA model is that the range of the ICC(1) in the ANOVA model is from -1 to $+1$, whereas in the HLM model it is from 0 to $+1$ (Hofmann et al., 2000).

ICC(2) provides an estimate of the reliability of the group means. ICC(1) and ICC(2) are related to each other as a function of group size. ICC(2) can be calculated by the following formula (Hofmann et al., 2000):

ICC(2) = k(ICC(1))/1+(k-1)ICC(1)

where

k represents the group size

Table 15 shows that all ICC(1) and ICC(2) scores of independent variables supported aggregation. The ICC(1) was .57 for structure, .42 for asymmetrical communication, and .44 for symmetrical communication, suggesting that about half of the variance in independent variables was between groups. In the method section, I noted that in this study between-organization variability in the measures of structure and internal communication was essential to assess the effects of organizational differences. Otherwise, findings would have been inconclusive because of range restriction in the measures. The result of the ICC (1) test showed that there was sufficient between-organization variability in the independent variables of this study. Also, considering that ICC (2) values of .70 or higher are acceptable, the ICC (2) values in Table 15 provides sufficient evidence for a reliable estimate of structure, asymmetrical communication, and symmetrical communication.

r_{wg} and ICCs showed that structure, asymmetrical communication, and symmetrical communication are indeed organizational-level constructs. Based on the above results, I could confirm that the three organizational-level variables could be characterized as a whole and single values might be sufficient to describe the organizations. Thus, I aggregated organizational-level independent variables to represent each company (James, Demaree, & Wolf, 1984).

Table 15

ICC(1) and ICC(2) of Independent Variables

Independent Variable	MSB	MSW	ICC(1)	ICC(2)
Structure	2.94**	.21	.57	.93
Asymmetrical Communication	3.98**	.50	.42	.87
Symmetrical Communication	4.19**	.49	.44	.88

** *p* < .01.

Descriptive Statistics

Means, Standard Deviations, and Correlations Among Independent Variables

In providing descriptive statistics for the variables of this study, I first report individual-level descriptive statistics of independent variables. Seven-point Likert-type scales ranging from "strongly disagree" to "strongly agree" were used in measuring each independent variable. Table 16 provides the means, standard deviations, and correlations of the *individual-level* independent variables before individual member scores were averaged within their respective organizations to provide an organizational-level measure. In this table, I investigated five structural variables (centralization, stratification, formalization, complexity, and participation) separately. In calculating individual-level correlations, I controlled for group membership because the group membership might have affected relationships among variables.

At the individual level, the means for the independent variables showed that mechanical aspects of organizational structure were more pervasive in the 31 organizations than organic aspects of structure. In general, participants of this study seemed to think their organizations were centralized ($M = 4.41$), formalized ($M = 4.18$), and stratified ($M = 4.31$) and did not allow employees to participate in decision making ($M = 3.72$). In case of complexity, the mean score was 3.99. This means the participants estimated that their companies have a medium degree of complexity.

It is interesting to notice that the means for asymmetrical communication and symmetrical communication were the same (M = 3.92). This shows the participants thought there was same amount of asymmetrical communication and symmetrical

Table 16

Individual-level Means, Standard Deviations, and Correlations Among Independent Variables (n = 296)

Variable	*M*	*SD*	1	2	3	4	5	6	7
1.Centralization	4.41	.97	1.00						
2.Formalization	4.18	.86	.07	1.00					
3.Stratification	4.31	.90	.27*	.13	1.00				
4.Complexity	3.99	.94	-.19*	.18*	-.29**	1.00			
5.Participation	3.72	.95	-.30**	-.09	-.30**	.28*	1.00		
6.Asymmetrical Communication	3.92	.92	.32**	.11	.28**	-.21*	-.31**	1.00	
7.Symmetrical Communication	3.92	.93	-.31**	-.09	-.25*	.32**	.29**	-.45**	1.00

*p < .05. **p < .01.

communication characteristics in their organizations. I think these mean scores supported the results of the exploratory factor analysis. The exploratory factor analysis results showed that asymmetrical communication and symmetrical communication coexisted in the participants' organizations. The mean scores supported my argument that communication system might not be a continuum and organizations can have both asymmetrical and symmetrical internal communication systems.

Table 16 also shows that, at the individual level, centralization and stratification were significantly correlated positively (r = .27, P < .05). Complexity and participation in decision making were also positively correlated significantly(r = .28, p < .05). Correlations between the above two sets of variables (centralization and stratification *vs*. complexity and participation) were negatively significant. Also, the table indicates that asymmetrical communication and symmetrical communication were significantly correlated negatively (r = -.45, p < .01). These relationships strongly confirmed the theoretical expectations.

The correlations with formalization deviated from the pattern. The rather low and insignificant correlation coefficients of formalization with other structural variables (except for the one with complexity) supported the factor analysis results, indicating that formalization and other structural variables are not on the same factor dimension.

I also examined organizational-level descriptive statistics of independent variables by averaging individual ratings within each organization to form an "organizational-level" variable. Table 17 provides the means, standard deviations, and intercorrelations of the organizational-level independent variables. In this table, I used

Table 17

Organizational-level Means, Standard Deviations, and Correlations Among

Independent Variables (n = 31)

Variable	*M*	*SD*	1	2	3
1.Structure	3.76	.57	1.00		
2.Asymmetrical Communication	3.89	.65	-.66**	1.00	
3.Symmetrical Communication	3.95	.67	.58**	-.68**	1.00

** *p* < .01.

the overall index of structure after removing the items for formalization based on the result of the exploratory factor analysis. Because a high score represents an organic structure, the first item measuring centralization and two items measuring stratification were reversed.

At the organizational level, the 31 participating companies had moderately mechanical structures ($M = 3.76$). The mean score of asymmetrical communication was 3.89 and the mean score of symmetrical communication was 3.95. However, the difference between the two mean scores was not large. Hence, a medium degree of both asymmetrical communication and symmetrical communication seemed to coexist in the participating organizations.

The organizational-level correlations strongly confirmed my theoretical anticipation. Given that a high structure score indicated an organic structure and a low score a mechanical structure, organizations with organic structures had symmetrical systems of internal communication ($r = .58$, $p < .01$) and organizations with mechanical structures had asymmetrical systems of internal communication ($r = -.66$, $p < .01$). As mentioned before, the correlation between asymmetrical communication and symmetrical communication was negatively significant ($r = -.68$, $p < .01$). This organizational-level correlation was higher than the individual-level correlation ($r = -.45$, $p < .01$). Relationships among aggregated data tend to be higher than corresponding relationships among individual data elements. (Robinson, 1950; Thorndike, 1939, as cited in Kozlowski & Klein, 2000).

Means, Standard Deviations, and Correlations Among Dependent Variables

Table 18 shows descriptive statistics of dependent variables. Seven-point Likert-type scales ranging from "strongly disagree" to "strongly agree" were used in

measuring each dependent variable. The means for the relationship outcome variables showed that the participants basically had good relationships with their companies. The mean scores for each of four relationship outcomes were as follows: 3.90 for control mutuality, 4.05 for trust, 4.44 for commitment, and 4.60 for satisfaction.

Overall, the participants had high degrees of commitment and satisfaction. Control mutuality was the lowest among four outcome variables. It made sense considering that control mutuality designates "the degree to which the parties in a relationship are satisfied with the amount of control they have over the relationship" (J. Grunig & Hung, 2000, p. 29). I think it is difficult for employees to hold control mutuality because control mutuality involves the issue of who has power and control in organizations. Usually, organizations do not allow their employees to have control over employee-organization relationships. In summary, the participants regarded the relationships with their companies as being comparatively of a lower degree of control mutuality, a medium degree of trust, and of comparatively higher degrees of commitment and satisfaction.

The participants also believed that their companies and supervisors treated them fairly. The mean scores for justice were as follows: 5.08 for supervisory procedural justice, 4.65 for supervisory interactional justice, 4.37 for organizational procedural justice, and 3.96 for organizational interactional justice.

Table 18

Means, Standard Deviations, and Correlations Among Dependent Variables (n =

895)

Variable	*M*	*SD*	1	2	3	4	5
1. Supervisory procedural justice	5.08	1.23	1.00				
2. Supervisory interactional justice	4.65	1.20	.73**	1.00			
3. Organizational procedural justice	4.37	1.42	.38**	.40**	1.00		
4. Organizational interactional justice	3.96	1.20	.32**	.46**	.70**	1.00	
5. Exchange relationship	4.05	1.26	-.17**	-.15**	-.27**	-.30**	1.00
6. Communal relationship	3.89	1.31	.26**	.29**	.41**	.54**	-.47**
7. Control mutuality	3.90	1.07	.33**	.42**	.59**	.72**	-.33**
8. Trust	4.05	1.15	.34**	.41**	.57**	.70**	-.34**
9. Commitment	4.44	1.11	.37**	.45**	.49**	.60**	-.28**
10. Satisfaction	4.60	1.19	.40**	.45**	.50**	.57**	-.31**

(table continues)

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Table 18 *(continued)*

Variable	*M*	*SD*	6	7	8	9	10
1. Supervisory procedural justice	5.08	1.23					
2. Supervisory interactional justice	4.65	1.20					
3. Organizational procedural justice	4.37	1.42					
4. Organizational interactional justice	3.96	1.20					
5. Exchange relationship	4.05	1.26					
6. Communal relationship	3.89	1.31	1.00				
7. Control mutuality	3.90	1.07	.54**	1.00			
8. Trust	4.05	1.15	.56**	.70**	1.00		
9. Commitment	4.44	1.11	.48**	.62**	.69**	1.00	
10. Satisfaction	4.60	1.19	.46**	.61**	.65**	.70**	1.00

**$p < .01$.

It should be noted that the employees attributed more fairness to their supervisors than to their companies. There can be several possible interpretations. One explanation may be that when people evaluate more specific things or people, they tend to be more generous. It might be because they have shared particular experiences with those people, which led them to feel as if they had close relationships with the people. Or it might be that personal acquaintances hinder them from giving poor evaluations.

Another explanation can be that the participants' supervisors indeed treated them more fairly than their companies. Usually, it is easier to change or improve individual attitudes and behaviors than organizational events and atmosphere.

The mean score of exchange relationships was 4.05 and the mean score of communal relationships was 3.89. Thus, the participants seemed to perceive that they had more of an exchange relationship with their organizations than a communal relationship. However, the difference between the two mean scores was not large.

All correlations were significant. It made sense that all correlations were positive, except for the ones with exchange relationships, given that almost all dependent variables described positive aspects of organizations. All correlations between exchange relationships and other dependent variables were negatively significant implying the variable's destructive role in organizations.

Multicollinearity Test

Multicollinearity refers to a "strong linear relationship between two or more of the predictors." (Lomax, 2001, p. 62). When independent variables are highly correlated, they might convey essentially the same information. In this case, no independent variables may contribute significantly to the model after the others are

included. Therefore, the problem is that as the independent variables become more highly correlated, it becomes more difficult to determine which independent variable is actually producing the effect on a dependent variable. Because my goal is to understand how the various independent variables affect the dependent variable, not simply to predict the dependent variable from a set of predictors, multicollinearity can be a problem in this study (Lomax, 2001).

The easiest way to detect multicollinearity is to examine the bivariate correlations between independent variables, looking for "big" values, e.g., .80 and above (Chatterjee, Hadi, & Price, 2000). In my study, the organizational-level correlations among predictors are .58, -.66, and -.68. They are not big enough to imply the possibility of multicollinearity. However, I conducted a multicollinearity test to be sure that the organizational-level independent variables do not actually represent the same latent construct.

Table 19 shows the results of the multicollinearity test. I ran multiple regressions using only independent variables, letting each one take a turn being a dependent variable. A tolerance close to 1 means there is little multicollinearity, whereas a value close to 0 suggests that multicollinearity may be a threat. The reciprocal of the tolerance is known as the Variance Inflation Factor (VIF). The VIF shows how much variance of the coefficient estimate is being inflated by multicollinearity. A commonly given rule of thumb is that VIFs of 10 or higher may be a reason for concern (Lomax, 2001). From the VIF test, I concluded that multicollinearity is not a big problem with the independent variables of this study.

Table 19

VIF and Tolerance Test to Check Organizational-Level Multicollinearity (n = 31)

	Dependent Variable	Independent Variable	R^2	Tolerance	VIF
1	Structure	Asymmetrical COMM			
		Symmetrical COMM	.47	.54	1.87
2	Asymmetrical COMM	Structure			
		Symmetrical COMM	.57	.67	1.50
3	Symmetrical COMM	Structure			
		Asymmetrical COMM	.49	.56	1.79

Testing Hypotheses

I used correlations and regressions to test hypothesis 1 because the first

hypothesis were about same-level variables (organizational structure and internal

communication). In the case of single-level models, once the emergent constructs are

raised to the unit level, the unit-level model is straightforward to test using common

statistical methods such as correlation analysis and hierarchical regression according

to the nature of construct relationships (Kozlowski & Klein, 2000).

With respect to the rest of the hypotheses, I conducted HLM tests. Even

though hypotheses 2 and 5 were also about same-level variables (justice and

relationships), those hypotheses could be appropriately analyzed using the random-

coefficient regression models of HLM, which is the second step in conducting HLM

tests.

In this section, I first present the results to test hypothesis 1. Before presenting

the results of HLM analyses, I explain the logic and analysis procedure of HLM

because HLM is not yet commonly used in public relations research. And, I report the

results of the tests of hypotheses 2, 3, 4, and 5, and the subhypotheses 7s. Finally, I

provide the results of the mediation test, the subhypotheses 6s.

Test of Hypothesis 1

Hypothesis 1 predicted that organizations with organic (mechanical) structures

have symmetrical (asymmetrical) communication systems. I tested hypothesis 1 using

correlations and regressions as mentioned earlier.

Table 17 already showed significant organizational-level relationships among

structure, asymmetrical communication, and symmetrical communication.

Considering that a high score for structure indicated an organic structure and a low

score a mechanical structure, an organic structure was significantly correlated with symmetrical communication positively (r = .58, p < .01) and significantly correlated with asymmetrical communication negatively (r = -.66, p < .01), as predicted. Since organic and mechanical structures were represented at opposite ends of the same scale, this correlation means that mechanical structure and asymmetrical communication are positively correlated.

I also conducted regression analyses using the organizational-level variables. The result of this analysis is reported in Table 20. Because I chose to treat asymmetrical communication and symmetrical communication as distinctive variables at the exploratory factor analysis stage, I regressed two communication variables separately on the structure variable.

The results were significant at the .01 level, showing that structure is a strong predictor of both types of internal communication system. The R^2 score indicated that approximately 44% of the variance in asymmetrical communication was attributable to the variance of structure. The R^2 score in the symmetrical communication model showed that structure accounted for about 33% of the variance in symmetrical communication. Thus, hypothesis 1 was supported.

This study replicated the result of L. Grunig et al.'s (2002) research that organizations with organic structures have symmetrical systems of internal communication. Also, I think the regression analysis results supported the argument that once structures are in place they constrain communication and limit its ability to change the structures (J. Grunig, personal communication, March 3, 2004). Thus, communication practitioners who want to implement a system of symmetrical

Table 20

Regression Analysis Summary for H1 (n = 31)

	Variable				
Indepent Variable	Dependent Variable	*B*	*SEB*	*β*	*R²*
Structure	Asymmetrical COMM	-1.36	.28	-.66**	.44
	Symmetrical COMM	1.08	.28	.58**	.33

Note. The regression equations in raw score form are respectively:

Asymmetrical communication = -1.36 (Structure) + 8.79

Symmetrical communication = 1.08 (Structure) + .02

**p < .01.

communication will have to start it by establishing an organic organizational structure.

This result is important in that it was formulated at the organizational level of analysis. Thus far, there has been little research to examine the relationship between organizational structure and communication at the organization level (Hatch, 1997) even though the constructs are obviously organizational-level constructs. Before conducting the correlation and regression analyses, I first aggregated individual-level data of the structure and communication constructs into organizational-level data after justifying the aggregation. Thus, this result reflects the relationship between organizational structure and internal communication at the organizational level.

Summary

Hypothesis 1 was supported. Correlation tests revealed significant organizational-level relationships among independent variables. An organic structure was significantly correlated with symmetrical communication positively ($r = .58$, $p < .01$) and significantly correlated with asymmetrical communication negatively ($r = -.66$, $p < .01$), as predicted. I also conducted regression analyses using the organizational-level variables. The results were significant at the .01 level, showing that structure is a strong predictor of both types of internal communication system. Thus, taking the theoretical assumptions of this study into account, I concluded that organizations with organic (mechanical) structures have symmetrical (asymmetrical) communication systems.

The Logic and Procedures of HLM Data Analysis

This study is a cross-level analysis. Thus, in this study, HLM (Raudenbush & Bryk, 2002) was used to analyze most of the relationships among variables. Because

HLM is not yet commonly used in public relations research, I explain the logic and analysis procedure of HLM before providing the results of hypotheses tests.

HLM is a type of random coefficient model and is specifically designed to accommodate nested or multilevel data structure. HLM is especially appropriate in assessing the extent to which group-level independent variables explain between unit variance in the dependent variables, which is the main purpose of this study.

A number of researchers have described the benefits of HLM over ordinary least square (OLS) regression when examining nested or multilevel data structures (Bliese, 2000; Hofmann, 1997; Pollack, 1998). HLM addresses a number of conceptual and technical difficulties that plague analyses of multilevel data in which individuals are nested or clustered within groups. These include aggregation and disaggregation bias, misestimated standard errors, and heterogeneity of regression (Hofmann et al., 2000).

When researchers deal with multilevel variables without considering appropriate multi-level analytic techniques, they are given two options for data analysis (Hofmann et al., 2000). The first option is that they can "disaggregate data such that each lower-level unit is assigned a score representing a higher-level unit within which it is nested" (p. Hofmann, 1997, p. 725). In the current study, this would entail assigning down a company's score on each organizational-level variable (e.g., organizational structure) to employees within the company and conducting OLS regression analysis at the individual level. The problem with this approach is that lower-level units in one higher-level unit are influenced by a similar effect within the same higher-level unit. Therefore, this violates the independence of observations assumption that underlies the OLS approach. The second option is to aggregate lower-

level units and examine proposed relationships at the aggregated-level. In this study, this would entail aggregating individual-level variables (e.g., employees' satisfaction) and conducting OLS regression analysis at the organizational level. The shortcoming of this method is that potentially meaningful lower-level variance in outcome measures is not taken into consideration (Bryk & Raudenbush, 1992).

HLM overcomes the weaknesses of the above two data analysis methods in that researchers can model explicitly both within- and between- group variance, as well as examine the impact of higher-level units on lower-level outcomes while maintaining the appropriate level of analysis (Lee, 2003).

HLM has been used to study a number of organizational phenomena, "such as the effects of group cohesiveness on the relationship between job satisfaction and courtesy, human resource practices on perceived organizational support and trust in management, and goal congruence between teachers and principals (e.g., Kidwell, Mossholder, & Bennett, 1997; Vancouver, Millsap, & Peters, 1994; Whitener, 2001)" (Sacco, Scheu, Ryan, & Schmitt, 2003, p. 852).

HLM is conducted as a simultaneous, two-stage process that investigates variables occurring at two levels of analysis (Hofmann et al., 2000). In the level 1 or first stage, "HLM estimates the relationship among lower level (e.g., individual-level) variables separately for each higher-level unit (e.g., organization-level), calculating the intercept and slope(s) for each group" (Klein & Kozlowski, 2000, p. 230). Thus, for each group there will be a level 1 intercept term as well as a slope term summarizing the relationship between lower-level constructs. These intercept and slope estimates from the level 1 analysis are then used as outcome variables in the level 2 analysis. In the second step, "HLM analyzes the relationship between higher

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level (e.g., organizational-level) variables and the intercept and slopes" for each unit (Klein & Kozlowski, 2000, p. 230). To be more specific, level 2 models having the level 1 intercept as the outcome variable are analogous to cross-level main effect models, in which group-level variables predict average levels of the individual-level outcome. Alternatively, level 2 models that use the level 1 slope as the outcome variable are analogous to cross-level interactions where group-level variables moderate the relationship between two individual-level variables. This approach can be summarized as "a regression of regression" (Hofmann et al., 2000, p. 473) because the level 1 regression parameters (intercepts and slopes) are themselves regressed onto higher-level variables in the level 2 analysis.

In the following sections I detail the logic of HLM as it applies to the research reported here. Hypothesis testing in HLM involves evaluating a series of models. The statistical significance of specific parameters in initial models is a prerequisite for finding significant results in subsequent models (Sacco et al., 2003).

Null Model

The first step in evaluating an HLM is equivalent to a one-way ANOVA test of dependent variables and yields variance component estimates and significance tests of the within- and between-group variance. In this study, this information indicates whether there are significant employee and company difference in justice, relationship types, and relationship outcomes. This model is known as a *null model* because no predictors are used (Hofmann et al., 2000).

For instance, in the current study, I estimated the following model to determine whether there were significant within- and between- group differences in employee satisfaction, which is one of the dependent variables in my study:

Level 1

Satisfaction = $\beta_{0j} + r_{ij}$ (1)

Level 2

$\beta_{0j} = \gamma_{00} + U_{0j}$ (2)

Where

β_{0j} = mean for satisfaction for company j

γ_{00} = grand mean satisfaction

Variance $(r_{ij}) = \sigma^2$ = within-company variance in satisfaction

Variance $(U_{0j}) = \tau_{00}$ = between-company variance in satisfaction

The level-1 equation predicts employees' satisfaction based on the mean satisfaction (i.e., intercept) within each of the *j* companies (β_{0j}) and the error for each of *i* employees (r_{ij}). The level-2 equation models each company's intercept based on the grand mean (γ_{00}) and each company's deviation (U_{0j}).

In addition, the associated variance components of these error terms can be used to calculate an intra class coefficient (ICC), which indexes the ratio of between-company variance in satisfaction to total variance. ICC(1) can be calculated by the following equation:

ICC (1) = $\tau_{00} / (\tau_{00} + \sigma^2)$

On the one hand, "HLM does not provide a significance test for the within-group variance component (σ^2), but it does provide a significance test for the between-group variance (τ_{00})" (Hofmann et al., 2000, p. 480). A significant between-group variance indicates statistically significant between-group variability. In my study, it means there is significant between-company variability in satisfaction. In

contrast, a nonsignificant between-group variance indicates that HLM would yield

little additional information as compared with OLS regression.

Random-Coefficient Regression Model

The next step involves adding a predictor to the level-1 equation. For example,

using organizational justice as a level-1 predictor, I estimated the following set of

equations for employee satisfaction:

Level 1

Satisfaction = $\beta_{0j} + \beta_{1j}$ (organizational justice) + r_{ij} (3)

Level 2

$\beta_{0j} = \gamma_{00} + U_{0j}$ (4)

$\beta_{1j} = \gamma_{10} + U_{1j}$ (5)

where

γ_{00} = mean of the intercepts across groups

γ_{10} = mean of the slopes across groups

Variance $(r_{ij}) = \sigma^2$ = level 1 residual variance

Variance $(U_{0j}) = \tau_{00}$ = variance in intercepts

Variance $(U_{1j}) = \tau_{11}$ = variance in slopes

These equations are known as *random-coefficient regression models* because the

regression coefficients β_{0j} and β_{1j} are modeled as random effects. These random

coefficients are predicted by the overall mean (γ_{00}) and slope (γ_{10}) for each company.

The significance of these level-2 parameters indicates whether average mean and

slope across groups, respectively, are significantly different from 0 (Hofmann et al.,

2000).

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In the current example, the significance of the γ_{00} parameter would indicate whether, on average, satisfaction is significantly different from 0. The significance of the γ_{10} parameter would indicate whether, across groups, organizational justice is related to satisfaction. That is, the significance of the γ_{10} parameter indicates whether there is a significant relationship between an individual-level predictor and an individual-level outcome. In this study, the significance of the γ_{10} parameter directly tests hypothesis 5, which predicted that perceived organizational justice was positively related to employees' satisfaction.

The random-coefficient regression model allows me to do one more thing. I can calculate the magnitude of the relationship between organizational justice and employees' satisfaction. From the null model, I have an estimate of the within-company variance in satisfaction and from the current model I have an estimate of the residual within-company variance after controlling for organizational justice. Comparing these two variance estimates allows me to compute R^2 for the relationship between satisfaction and organizational justice. Specifically, I can obtain the R^2 for satisfaction by computing the following ratio (Hofmann et al., 2000):

R^2 for level 1 model = (σ^2 oneway ANOVA – σ^2 random regression)

$$/\sigma^2 \text{ oneway ANOVA}$$

This ratio represents the percentage of the level 1 within-group variance in satisfaction that is accounted for by organizational justice. It should be noted that this R^2 value represents the proportion of explainable variance within groups, thus one should not confuse this value with traditional values calculated in linear regression models (Snijders & Bosker, 1994).

The statistical significance of the variance components for the error parameters U_{0j} and U_{1j} indicates whether there is a significant amount of variability in the corresponding coefficients at level 1. If there is a significant variability in the intercepts, the next step involves assessing whether a level-2 variable predicts that variability.

Intercepts-as-Outcomes Model

The next step involves determining whether an organizational-level variable predicts the variability in the intercepts. This model is called an *intercepts-as-outcomes model*. Continuing with the current example and adding organizational structure as a level-2 predictor, I estimated the following set of equations to test for significant differences in satisfaction as a function of organizational structure:

Level 1

Satisfaction $= \beta_{0j} + \beta_{1j}$ (organizational justice) $+ r_{ij}$ (6)

Level 2

$\beta_{0j} = \gamma_{00} + \gamma_{01}$ (structure) $+ U_{0j}$ (7)

$\beta_{1j} = \gamma_{10} + U_{1j}$ (8)

where

γ_{00} = level 2 intercept

γ_{01} = level 2 slope

γ_{10} = mean of the slopes across groups

Variance $(r_{ij}) = \sigma^2$ = level 1 residual variance

Variance $(U_{0j}) = \tau_{00}$ = residual intercept variance

Variance $(U_{1j}) = \tau_{11}$ = variance in slopes

In the above set of equations, a significant γ_{01} parameter would indicate that an organizational-level predictor is significantly related to an individual-level outcome. In my study, the significance of the γ_{01} parameter is necessary to test the subhypothesis 7s, one of which predicted that organic structure is positively related to employees' satisfaction.

In order to obtain the amount of intercept variance accounted for by organizational structure, I can compare the variance in the τ_{00} from the random-coefficient regression model (the total between-company variance in the intercept term across companies) with the variance in the τ_{00} for the current model (the residual variance in the intercept after accounting for structure). Specifically, I can obtain the R^2 by computing the following ratio:

R^2 for level 2 intercept model = (τ_{00} random regression – τ_{00} intercepts-as-outcomes)

/ τ_{00} random regression

The R^2 will indicate that structure accounted for certain percentage of between-group variance in the intercepts (Hofmann et al., 2000).

Slopes-as-Outcomes Model

If there is a significant variability in the slopes, the next step involves assessing whether a level-2 variable predicts that variability. The next model is called a *slopes-as-outcomes model*. This model tests a cross-level moderator or cross-level interaction because a level-2 variable is hypothesized to moderate the relationship between two individual-level variables (Sacco et al., 2003).

Because my study does not include hypotheses on moderating effects, I did not run the slopes-as-outcomes models. However, hypothetically, if I want to test

whether organizational structure moderates the relationship between organizational

justice and satisfaction, I will have the following set of equations:

Level 1

Satisfaction = β_{0j} + β_{1j} (organizational justice) + r_{ij} (9)

Level 2

β_{0j} = γ_{00} + γ_{01} (structure) + U_{0j} (10)

β_{1j} = γ_{10} + γ_{11} (structure) + U_{1j} (11)

where

γ_{00} = level 2 intercept,

γ_{01} = level 2 slope

γ_{10} = level 2 intercept

γ_{11} = level 2 slope

Variance (r_{ij}) = σ^2 = level 1 residual variance

Variance (U_{0j}) = τ_{00} = residual intercept variance

Variance (U_{1j}) = τ_{11} = residual slope variance

In this model, the significance of the γ_{11} parameter directly tests the

moderation hypothesis. In addition, using the following equation, I can compute the

proportion of variance accounted for by the organizational structure to the total

variance in the organizational justice-satisfaction slopes across groups (Sacco et al.,

2003):

R^2 for level 2 slope model = (τ_{11} intercepts-as-outcomes – τ_{00} slopes-as-outcomes)

/ τ_{00} intercepts-as-outcomes

Centering

Before presenting the results, I address another important issue regarding the analysis of cross-level data: the issue of centering. Raudenbush and Bryk (2002) stated that "it is essential that the variables under study have precise meaning so that statistical results can be related to the theoretical concerns that motivate the research" (p. 31). In the case of HLM models, the intercepts and slopes in the level-1 model become outcome variables at level 2. So, it is vital that the meaning of these outcome variables be clearly understood.

According to Raudenbush & Bryk (2002), the meaning of the intercept in the level-1 model depends on the location of the level-1 predictor variables, the Xs. The intercept term is interpreted as the expected value of Y_{ij} when X_{ij} is zero. In the organizational research, however, "having an intercept value equal to the expected value of Y_{ij} when X_{ij} is zero may not be particularly meaningful" (Hofmann & Gavin, 1998, p. 626). For example, it means little for a person to perceive zero organizational justice. Thus, it should be asked whether there are alternative scalings that would render the intercept more interpretable. That is, if an X_{ij} value of zero is not meaningful, then researchers may want to transform X_{ij}, or "choose a location for X_{ij}" (Raudenbush & Bryk, 2002, p. 31).

Alternative scales for level-1 predictors have been discussed by a number of researchers (e.g., Hofmann & Gavin, 1998; Raudenbush & Bryk, 2002). The possible approaches to scaling are *grand-mean centering, group-mean centering*, and *no centering*. The researchers cited above noted that there is no correct centering approach, although the different approaches can yield different results and should be

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interpreted differently. Consequently, the recommended approach is to make a decision based on theoretical and conceptual considerations (Sacco et al., 2003).

Hofmann and Gavin (1998) noted that there have emerged four dominant approaches from which researchers have investigated relationships between variables that span multiple levels of analysis – incremental, mediational, moderational, and separate. In this study, the hypotheses 2, 3, 4, and 5 and the subhypotheses 7s are based on the incremental approach and the subhypotheses 6s are based on the mediational approach.

The *incremental* approach simply states that group-level variables act as *main effects* in the prediction of individual-level outcomes. Typically, cross-level researchers adopting this paradigm investigate the influence of group-level variables on individual-level outcomes after controlling for various individual-level predictors. In essence, the researchers are interested in "whether the group-level variable provides incremental prediction of an individual-level outcome *over and above* individual-level predictors" (Hofmann & Gavin, 1998, p. 634). I think the hypotheses 2, 3, 4, and 5 and the subhypotheses 7s of this study adopts the incremental paradigm because the main interests lie in testing group-level variables' main effects after controlling for individual-level variables.

On the other hand, *the mediational approach* proposes that "group-level variables influence individual behaviors and attitudes only indirectly through other mediating mechanisms" (Hofmann & Gavin, 1998, p. 635). The subhypotheses 6s of this study are about mediation effects.

In this study, I used grand-mean centering following Hofmann and Gavin's (1998) recommendation. Hofmann and Gavin noted that in both the incremental

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approach and the mediational approach, grand-mean centering provides an appropriate test of models (p. 636). Grand-mean centering means that the grand mean of the level 1 variable is subtracted from each individual's score (i.e., $X_{ij} - X$ where X is the grand mean of X_{ij}). Grand-mean centering yields an intercept equal to the expected value of Y_{ij} for an individual with an "average" level of X_{ij} (Hofmann & Gavin, 1998). Under grand-mean centering, the variance in the intercept term represents the between-group variance in the outcome variable adjusted for the level-1 variables.

Control Variables

At the HLM analysis stage, I included two control variables – size (organizational-level) and tenure in organization (individual-level). Size of an organization affects behavior that occurs within the organization (Indik, 1963, as cited in Miller, 1999; Hall, 1972, Hage & Aiken, 1970, as cited in J. Grunig, 1976). I reasoned that people in small organizations would have more chances to get to know management, which leads them to have better relationships with their organization. On the other hand, in large organizations, systems usually tend to be bureaucratic, disturbing communication between management and employees. Employees in large organizations are likely to have negative feelings and perceptions toward management and the organizations. Thus, I expected the size of organizations would have negative relationships with the dependent variables in this study. It was possible to use organizational size as a control variable because the samples of my study varied in size. Size was measured as the natural logarithm of the number of employees in the organization. The log transformation was necessary to correct for skewness of the variable's distribution (Hoegl, Parboteeah, & Munson, 2003).

I included tenure in organizations as an individual-level control variable. It is reasonable to think that satisfied employees will stay longer in their companies than dissatisfied employees. Also, it is possible that the longer employees work for their company, the more they feel unified with the company, perceiving more justice and having more trust, commitment, control mutuality, and satisfaction. Thus, I anticipated that employees with longer tenure would have better relationships with companies and feel that they are treated more fairly than employees with shorter tenure.

Test of Hypotheses 2, 3, 4, 5, and 7s

I followed the steps outlined in the "The Logic and Procedures of HLM Data Analysis" section in testing the hypotheses 2, 3, 4, and 5 and the subhypotheses 7s. In this section, I report the results of all steps in the HLM analyses (except for the slopes-as-outcomes models) for completeness even if some steps are not directly related to tests of hypotheses.

In HLM analyses, listwise deletion was adopted to deal with missing data. HLM 5 program provides two options for handling missing data at level 1: pairwise deletion and listwise deletion (Raudenbush et al., 2000). Raudenbush et al. cautioned against using the pairwise option when the amount of missing data is substantial. In this study, tenure (individual-level control variable) had 30 missing values in total. At level 2, HLM assumes complete data.

HLM analysis in this study was composed of two stages because there were two dependent constructs – organizational justice (mediator) and organizational relationships. In Figure 2 and 3, I represent two models I used at the HLM analysis stage.

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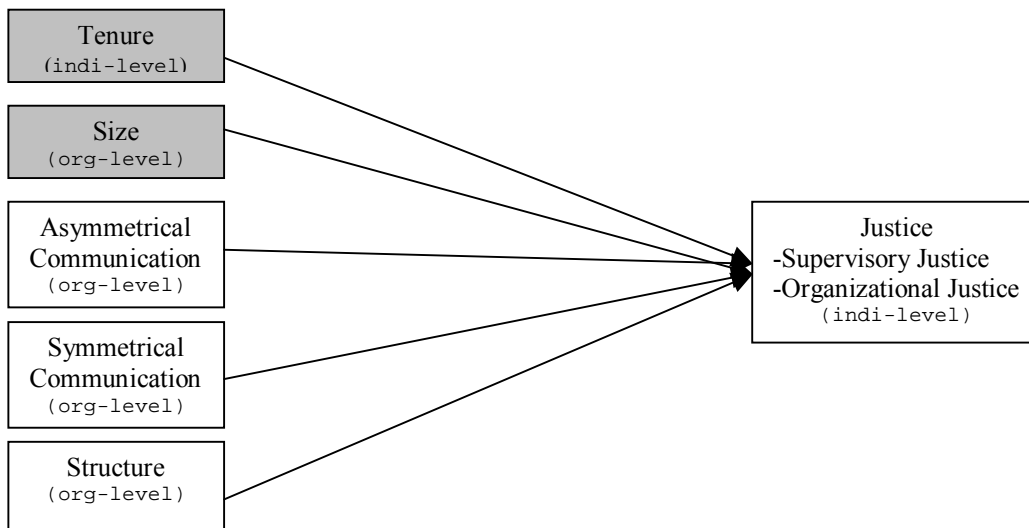
Figure 2. Model to test hypotheses 3 and 4: When a dependent construct is justice[6].

Null model

Level 1: Justice = $\beta_{0j} + r_{ij}$

Level 2: $\beta_{0j} = \gamma_{00} + U_{0j}$

Random-coefficient regression model

Level 1:

Justice = $\beta_{0j} + \beta_{1j}$ (tenure) $+ r_{ij}$

Level 2:

$\beta_{0j} = \gamma_{00} + U_{0j}$

$\beta_{1j} = \gamma_{10} + U_{1j}$

Intercepts-as-outcomes model

Level 1:

---

[6] Colored boxes mean control variables.

Justice $= \beta_{0j} + \beta_{1j}$ (tenure) $+ r_{ij}$

Level 2:

$\beta_{0j} = \gamma_{00} + \gamma_{01}$ (size) $+ \gamma_{02}$ (asymmetrical communication) $+$

γ_{03} (symmetrical communication) $+ \gamma_{04}$ (structure) $+ U_{0j}$

$\beta_{1j} = \gamma_{10} + U_{1j}$
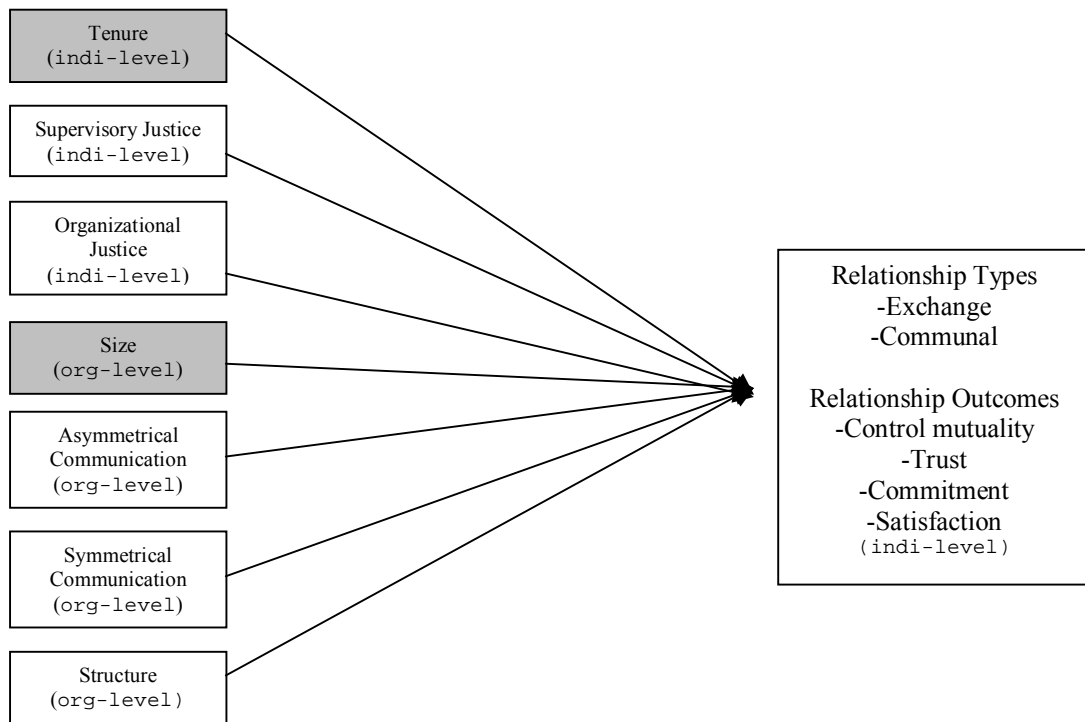
Figure 3. Model to test hypotheses 2 and 5 and subhypotheses 7s: When a dependent

construct is relationships[7].

Null model

Level 1: Relationship Types/ Outcomes = $\beta_{0j} + r_{ij}$

Level 2: $\beta_{0j} = \gamma_{00} + U_{0j}$

Random Coefficients Regression Model

Level 1:

Relationship Types/Outcomes = $\beta_{0j} + \beta_{1j}$ (tenure) + β_{2j} (supervisory justice) + β_{3j}

(organizational justice) + r_{ij}

Level 2:

---

[7] Colored boxes mean control variables.

$$\beta_{0j} = \gamma_{00} + U_{0j}$$

$$\beta_{1j} = \gamma_{10} + U_{1j}$$

$$\beta_{2j} = \gamma_{20} + U_{2j}$$

$$\beta_{3j} = \gamma_{30} + U_{3j}$$

Intercepts-as-Outcomes Model

Level 1:

Relationship Types/Outcomes = $\beta_{0j} + \beta_{1j}$ (tenure) + β_{2j} (supervisory justice) + β_{3j}

(organizational justice) + r_{ij}

Level 2:

$\beta_{0j} = \gamma_{00} + \gamma_{01}$ (size) + γ_{02} (asymmetrical communication) + γ_{03} (symmetrical

communication) + γ_{04} (structure) + U_{0j}

$$\beta_{1j} = \gamma_{10} + U_{1j}$$

$$\beta_{2j} = \gamma_{20} + U_{2j}$$

$$\beta_{3j} = \gamma_{30} + U_{3j}$$

Null Model Tests to Calculate ICCs

The first step in HLM analysis investigates the amount of between-group variance in outcome variables by partitioning the total variance in the outcome variables into within-group and between-group components. Thus I first estimated all null models. Table 21 reports the ICC values for the dependent variables in this study.

Table 21

Results of Null Model Tests

Dependent Variable	τ_{00}	σ^2	ICC(1)	ICC(2)
Supervisory justice	.14**	1.21	.10	.76
Organizational justice	.40**	1.04	.28	.91
Exchange relationship	.34**	1.27	.21	.88
Communal relationship	.45**	1.29	.26	.91
Control mutuality	.29**	.87	.25	.90
Trust	.31**	1.00	.24	.90
Commitment	.20**	1.03	.16	.85
Satisfaction	.21**	1.00	.24	.90

Note. ICC (1) = $\tau_{00} / (\tau_{00} + \sigma^2)$

ICC(2) = k(ICC(1))/1+(k-1)ICC(1), where k represents the group size. In my study, I used the average number of participants in questionnaire B, which is 28.9 people.

**$p < .01$.

The ICCs were large enough and strongly supported the use of HLM in my research. ICC(1) can be interpreted as the proportion of the total variance that can be explained by group membership (Bliese, 2000). For example, the supervisory justice variable's ICC(1) score was .10 indicating that 10% of the variance resides between groups. All between-group variances (τ_{00}) were significant implying that the dependent variables were actually related to group-level variables. Also, all ICC(2) scores satisfied the criterion (.70). These results showed that it was worthwhile to conduct a multilevel analysis.

Test of Hypotheses 3 and 4

Random-coefficient regression models. To test hypotheses 3 and 4, I first ran the random-coefficient regression models using tenure as an individual-level control variable. At this stage, because there were two separate dependent variables, I estimated two random-coefficient regression models: one for supervisory justice and the other for organizational justice. Even though these models were not directly related to the tests of hypotheses, the models showed the relationships between tenure and two types of justice. It also yielded the results of significance tests of variance in the intercepts and slopes. Table 22 provides summary data for the tests of two random-coefficient regression models.

The t test associated with the γ_{10} parameters was significant for organizational justice ($\gamma_{10} = .01$, p < .05) and non-significant for supervisory justice ($\gamma_{10} = .00$, p = .30). That is, tenure is significantly related to organizational justice but not to supervisory justice. Thus, the results indicated that the participants who worked for companies for a long time thought that their companies treated them fairly, but

Table 22

Random-Coefficient Regression Model for Hypotheses 3 and 4

Dependent Variable	γ_{10} (Tenure)	r_{ij}	U_{0j}	U_{1j}
Supervisory Justice	.00	1.20	.13*	.00
Organizational Justice	.01*	1.03	.38**	.00

* $p < .05$. ** $p < .01$.

Level 1:

Justice = $\beta_{0j} + \beta_{1j}$ (tenure) + r_{ij}

Level 2:

$\beta_{0j} = \gamma_{00} + U_{0j}$

$\beta_{1j} = \gamma_{10} + U_{1j}$

where

β_{0j} = mean for justice for group j

β_{1j} = slope for group j

γ_{00} = mean of the intercepts across groups

γ_{10} = mean of the slopes across groups

r_{ij} = level 1 residual variance (σ^2)

U_{0j} = variance in intercepts (τ_{00})

U_{1j} = variance in slopes (τ_{11})

did not necessarily think that their supervisors treated them fairly.

I think this result might have resulted from the fact that supervisor-subordinate pairs are constantly in shift in organizations. Even long-tenured employees can have short-term relationships with their supervisors. That is, employees tend to have shorter relationships with their supervisors than with their companies. Thus, it is reasonable the long-tenured participants attributed more justice to their company than to their supervisors. However, the magnitude of the relationship between tenure and organizational justice was very small ($R^2 = .008$).

The column for the variance components of the intercepts (τ_{00}) showed that the intercepts varied significantly for both supervisory justice and organizational justice, thus satisfying a precondition for the testing of hypotheses 3 and 4. However, the variance components of the slopes (τ_{11}) were not significant. This was not a problem in this study because it was not the purpose of this study to test a cross-level moderator or cross-level interaction.

Intercepts-as-outcomes models. Based on significant variance in the intercept terms across companies that I assessed from the random-coefficient regression models, I proceeded to estimate the intercepts-as-outcomes models to test hypotheses 3 and 4. To test these hypotheses, I estimated two intercepts-as-outcomes models because there were two separate dependent variables: one for supervisory justice and the other for organizational justice. In these models, three organizational-level predictors – asymmetrical communication, symmetrical communication, and structure – and one organizational-level control variable – size – were added. Table 23 provides a summary of the results of the intercepts-as-outcomes models used to test hypotheses 3 and 4.

Table 23

Intercepts-as-Outcomes Model for Hypotheses 3 and 4

Dependent Variable	γ_{01} (Size)	γ_{02} (Asymmetrical COMM)	γ_{03} (Symmetrical COMM)	γ_{04} (Structure)	U_{0j}
Supervisory Justice	-.02	-.12	.17**	.10	.07*
Organizational Justice	.05	-.17	.18*	.38*	.18*

$* p < .05. ** p < .01.$

Level 1:

Justice $= \beta_{0j} + \beta_{1j}$ (tenure) $+ r_{ij}$

Level 2:

$\beta_{0j} = \gamma_{00} + \gamma_{01}$ (size) $+ \gamma_{02}$ (asymmetrical communication) $+ \gamma_{03}$ (symmetrical

communication) $+ \gamma_{04}$ (structure) $+U_{0j}$

$\beta_{1j} = \gamma_{10} + U_{1j}$

where

β_{0j} = mean for justice for group j

β_{1j} = slope for group j

γ_{00} = level 2 intercept

$\gamma_{01}, \gamma_{02}, \gamma_{03}, \gamma_{04}$ = level 2 slopes (test Hypotheses 3 & 4)

r_{ij} = level 1 residual variance (σ^2)

U_{0j} = residual intercept variance (τ_{00}), U_{1j} = variance in slope (τ_{11})

Hypothesis 3 predicted that organic (mechanical) organizational structure is positively (negatively) related to employees' perceived justice. As Table 23 indicates, of the two γ_{04} parameters, only the γ_{04} parameter for the organizational justice variable was significant ($\gamma_{04} = .38$, p < .05), implying that structure is positively related to employees' perceived organizational justice.

Considering that a high score for structure indicated an organic structure and a low score a mechanical structure, the significant γ_{04} parameter means that organic structure was positively related to organizational justice and mechanic structure was negatively related to organizational justice. Structure was not significantly related to supervisory justice ($\gamma_{04} = .10$, p = .30). Because the original hypothesis 3 was only about organizational justice, I could conclude that the hypothesis 3 was supported.

Hypothesis 4 predicted that symmetrical (asymmetrical) communication is positively (negatively) related to employees' perceived justice. The γ_{03} parameters in Table 23 revealed that symmetrical communication was significantly associated with both supervisory justice ($\gamma_{03} = .17$, p < .01) and organizational justice ($\gamma_{03} = .18$, p < .05) positively. This means that in a company where the internal communication system was symmetrical, employees perceived that they were treated fairly by their company and their supervisors. Even though the relationship between asymmetrical communication and justice showed the anticipated direction ($\gamma_{02} = -.17$, p = .10; $\gamma_{02} = -.12$, p = .20), it was not significant. Thus, hypothesis 4 was partially supported.

These findings suggest two important points. First, only organizational justice was significantly related to organizational structure. The descriptive statistics revealed that the survey participants thought their supervisors treated them more fairly than their companies (see Table 18). However, the participants' high evaluations of

supervisory justice turned out to have little to do with organizational structure. On the other hand, organizational structure was a strong predictor of organizational justice. It is also worth noting that the magnitude of the relationship between organizational justice and structure ($\gamma_{04} = .38$) was almost four times larger than the one between supervisory justice and structure ($\gamma_{04} = .10$).

I think this result can be explained by the fact that the relationships between supervisors and subordinates remain at the interpersonal level. Supervisors and subordinates can keep good relationships and have good perceptions about each other if they perceive the other party is a good person, regardless of what kind of organizational structures their organizations have. I think this finding showes that organizational structure is more related to organizational justice than to supervisory justice.

Second, the results provided support for Lind and Tyler's (1988) proposal that organizational decisions occur in a large context and that this context may affect perceptions of fairness. This study showed that fairness perceptions took place in macro-level organizational contexts as well as in micro-level interpersonal contexts. Organizational structure and internal communication could increase or decrease fairness perceptions.

These results can contribute to the discussion of "What affects justice judgments?" (Schminke et al., 2002). Justice literature has mainly examined the above issue based on attributes of outcomes, procedures, and interpersonal treatment that may affect justice perceptions. However, this study suggested that organizational contexts such as structure and internal communication could influence employees' perceptions of organizational justice. Justice research can advance its body of

knowledge by understanding the role of organizational contexts in which justice judgments are made.

The organizational-level control variable, size, showed no significant relationships with justice ($\gamma_{01} = -.02$, p> .05 for supervisory justice; $\gamma_{01} = .05$, p> .05 for organizational justice). This result is consistent with Schminke et al.'s (2002) study. Schminke et al. hypothesized that size would be related to procedural and interactional justice, but they did not find any support.

On the other hand, using the total variance component from the random coefficient regression model and the residual variance for the intercept in this model, I calculated that the combination of the four organizational-level predictors – size, asymmetrical communication, symmetrical communication, and structure – accounted for 50% of the between-organization variance in the intercepts in the supervisory justice model and 55% in the organizational justice model. This means the four organizational-level predictors explained about half of the variance in the intercepts.

Additionally, the results of this test suggested that after including the four organizational-level variables, significant unexplained variance still existed in the intercept terms ($\tau_{00} = .07$, p < .05; $\tau_{00} = .18$, p < .05). This indicated that there was significant variance still remaining in the intercept terms that could be accounted for by other organizational-level predictors. Had theory and data allowed for additional organizational-level predictors, subsequent models could have been estimated in an effort to further account for this significant variance.

Summary. Hypothesis 3 was supported. Intercepts-as-outcomes models showed that organic structure was positively related to organizational justice and

mechanical structure was negatively related to organizational justice (γ_{04} = .38, p < .05).

The results also revealed that symmetrical communication was positively and significantly associated with organizational justice (γ_{03} = .18, p < .05). This means, in a company where the communication system was symmetrical, employees perceived that they were treated fairly by their company. But, the relationship between asymmetrical communication and organizational justice was not significant even though it showed the anticipated direction (γ_{02} = -.17, p = .10). Thus, hypothesis 4 was partially supported.

With respect to supervisory justice, structure was not significantly related to supervisory justice (γ_{04} = .10, p = .30). Also, the association between asymmetrical communication and supervisory justice was not significant (γ_{02} = -.12, p = .20). But, symmetrical communication was significantly associated with supervisory justice (γ_{03} = .17, p < .01).

Test of Hypotheses 2 and 5 and Subhypotheses 7s

Random-coefficient regression models. To test hypotheses 2 and 5, I estimated the random-coefficient regression models using relationship types and outcomes as dependent variables. Because there were six dependent variables, I estimated a separate random-coefficient regression model for each of these relationship types and outcomes. In this model, tenure was used as an individual-level control variable and supervisory justice and organizational justice were included as individual-level predictor variables. Table 24 reports a summary of the results of the tests of hypotheses 2 and 5.

Table 24

Random-Coefficient Regression Model for Hypotheses 2 and 5

Dependent Variable	γ_{10} (Tenure)	γ_{20} (Supevisory Justice)	γ_{30} (Organizational Justice)	U_{0j}
Exchange Relationship	-.02**	-.03	-.31**	.19**
Communal Relationship	-.00	.10**	.56**	.15**
Commitment	-.00	.21**	.51**	.02**
Trust	.00	.12**	.64**	.01**
Satisfaction	.01	.24**	.52**	.01**
Control Mutuality	.00	.10**	.63**	.02**

* $p < .05$. ** $p < .01$.

Level 1:

Relationship Types/Outcomes = $\beta_{0j} + \beta_{1j}$ (tenure) + β_{2j} (supervisory justice) + β_{3j} (organizational justice) + r_{ij}

Level 2:

$\beta_{0j} = \gamma_{00} + U_{0j}$

$\beta_{1j} = \gamma_{10} + U_{1j}$

$\beta_{2j} = \gamma_{20} + U_{2j}$

$\beta_{3j} = \gamma_{30} + U_{3j}$

where

β_{0j} = mean for relationship type/outcome for group j

$\beta_{1j},\ \beta_{2j},\ \beta_{3j}$ = slopes for group j

γ_{00} = mean of the intercepts across groups

$\gamma_{10},\ \gamma_{20},$ and γ_{30} = means of the slopes across groups (test Hypotheses 2 & 5)

r_{ij} = level 1 residual variance (σ^2)

U_{0j} = variance in intercepts (τ_{00})

$U_{1j}, U_{2j},$ and U_{3j} = variances in slopes ($\tau_{11},\ \tau_{22},\ \tau_{33}$)

Hypothesis 2 predicted that perceived organizational justice would positively (negatively) related to a communal (exchange) relationship. Table 24 shows that organizational justice ($\gamma_{30} = .56$, p < .01) and supervisory justice ($\gamma_{20} = .10$, p < .01) were both positively related to communal relationships significantly. This means employees who perceived that they were treated fairly by their company and their supervisors developed communal relationships with the company. In case of an exchange relationship, only the association with organizational justice was significant ($\gamma_{30} = -.31$, p < .01), showing the predicted negative direction. That is, if employees perceived that their company was fair, they were not likely to have exchange relationships with the company. The association between an exchange relationship and supervisory justice was negative as anticipated, but it was not significant ($\gamma_{20} = -.03$, p = .50). Because I originally hypothesized only about the associations between relationship types and organizational justice, I concluded that hypothesis 2 was supported.

The findings on the associations between justice and relationship types are in agreement with the arguments of Moorman, Blakely, and Niehoff (1998) and Pillai, Schriescheim, and Williams (1999). The above researchers noted that organizational justice facilitates the formation of social exchange relationships (i.e., communal relationships). These results imply that organizations and supervisors in the organizations should treat employees fairly to build communal relationships with the employees.

Hypothesis 5 predicted that perceived organizational justice would be positively related to employees' commitment, trust, satisfaction, and control mutuality. Hypothesis 5 was supported. Organizational justice ($\gamma_{30} = .51$, p < .01 for

commitment; $\gamma_{30} = .64$, p < .01 for trust; $\gamma_{30} = .52$, p < .01 for satisfaction; $\gamma_{30} = .63$, p < .01 for control mutuality) and supervisory justice ($\gamma_{20} = .21$, p < .01 for commitment; $\gamma_{20} = .12$, p < .01 for trust; $\gamma_{20} = .24$, p < .01 for satisfaction; $\gamma_{20} = .10$, p < .01 for control mutuality) were each significantly related positively to all of the relationship outcomes.

This means, when employees perceived that they were treated fairly by their company and their supervisors, they were likely to perceive commitment, trust, satisfaction, and control mutuality. This result is consistent with previous research on justice. In organizational studies, a significant amount of research has shown that judgments of fairness influence employees' satisfaction, commitment, and trust (Colquitt et al., 2001; Colquitt & Greenberg, 2003). Materson et al. (2000) argued that employees perceive acts of fairness to be contributions that enhance the quality and desirability of their ongoing relationships. This finding is also in agreement with the finding of Schminke et al. (2000). Schminke et al. found that when individuals are treated in a fair manner, they tend to have high-quality relationships with their supervisors.

On the other hand, this study was successful in showing that justice was positively related to control mutuality, which is a relational outcome that has been neglected by previous justice research. As I discussed in the descriptive statistics part, control mutuality is a relationship outcome that is the most difficult to achieve. Usually, it is hard to have high control mutuality because it involves the issue of who has power and control in organizations.

However, the results from the hypotheses 2 and 5 tests revealed that control mutuality could be attained if organizations and supervisors in organizations treat

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employees fairly. That is, if employees perceive fairness of the procedures used to make decisions and of how decisions are enacted by authority figures, the employees will be "satisfied with the amount of control they have over the relationship" (J. Grunig & Hung, 2000, p. 29). This explanation seems to make sense in that decision making and decision execution involve organizational power and control.

An intriguing aspect of the results of the hypotheses 2 and 5 tests is the magnitudes of associations. It is worth noting that the magnitudes of the associations between organizational justice and relationships ($\gamma_{30} = -.31$ for exchange relationship; $\gamma_{30} = .56$ for communal relationship; $\gamma_{30} = .51$ for commitment; $\gamma_{30} = .64$ for trust; $\gamma_{30} = .52$ for satisfaction; and $\gamma_{30} = .63$ for control mutuality) were consistently much larger than the ones between supervisory justice and relationships ($\gamma_{20} = -.03$ for exchange relationship; $\gamma_{20} = .10$ for communal relationship; $\gamma_{20} = .21$ for commitment; $\gamma_{20} = .12$ for trust; $\gamma_{20} = .24$ for satisfaction; and $\gamma_{20} = .10$ for control mutuality). This means organizational justice has much more impact on relationship types and outcomes than supervisory justice. I think this finding showed that organizational justice has more impacts on organizational relationships than supervisory justice does.

It is notable that the control variable of tenure showed a significant negative association with exchange relationships ($\gamma_{10} = -.02$, $p < .01$). That means the longer employees worked for a company, the less likely they had exchange relationships with the company. However, tenure was not significantly related to communal relationships ($\gamma_{10} = -.00$, $p > .05$). Also, tenure was not significantly associated with any of four relationship outcomes. This means long tenure prevents employees from having exchange relationships, but it does not necessarily help employees to hold

communal relationships, control mutuality, trust, commitment, and satisfaction. I think it is because building quality relationships takes other efforts than time by itself.

The results of R^2 test showed that the combination of tenure, supervisory justice, and organizational justice accounted for 17% of within-group variance in an exchange relationship and 33% of within-group variance in a communal relationship. The R^2 test also revealed that 33% of within-group variance in commitment, 55% of within-group variance in trust, 31% of within-group variance in satisfaction, and 62% of within-group variance in control mutuality were accounted for by the combination of tenure, supervisory justice, and organizational justice.

The column for the variance components of the intercepts (τ_{00}) also showed that the intercepts varied significantly for each of relationship types and outcomes, thus satisfying a precondition for the testing of the subhypotheses 7s. Thus, I could move on to test the subhypotheses 7s.

Summary. Hypothesis 2 was supported. Random-coefficient regression models showed that organizational justice ($\gamma_{30} = .56$, $p < .01$) was positively and significantly related to communal relationships. This means that employees who perceived that they were treated fairly by their company developed communal relationships with the company. The association between an exchange relationship and organizational justice was also significant ($\gamma_{30} = -.31$, $p < .01$), showing the predicted negative direction. That is, if employees perceived that their company was fair, they were not likely to have exchange relationships with the company.

Hypothesis 5 was also supported. Organizational justice ($\gamma_{30} = .51$, $p < .01$ for commitment; $\gamma_{30} = .64$, $p < .01$ for trust; $\gamma_{30} = .52$, $p < .01$ for satisfaction; $\gamma_{30} = .63$, $p < .01$ for control mutuality) was significantly and positively related to all of the

relationship outcomes. This means, employees who perceived that they were treated fairly by their company perceived a relationship consisting of commitment, trust, satisfaction, and control mutuality.

Supervisory justice ($\gamma_{20} = .10$, p < .01) was positively and significantly related to communal relationships. The association between an exchange relationship and supervisory justice was negative as anticipated, but it was not significant ($\gamma_{20} = -.03$, p = .50). Supervisory justice was also significantly and positively related to all of the relationship outcomes ($\gamma_{20} = .21$, p < .01 for commitment; $\gamma_{20} = .12$, p < .01 for trust; $\gamma_{20} = .24$, p < .01 for satisfaction; $\gamma_{20} = .10$, p < .01 for control mutuality).

Intercepts-as-outcomes models. Because there were six dependent variables in the subhypotheses 7s, I estimated six separate intercepts-as-outcomes models. Table 25 reports the results of the tests of hypotheses 7s. Subhypotheses 7s anticipated associations between organizational-level predictors and individual-level outcome variables.

Hypothesis 7a predicted that symmetrical (asymmetrical) internal communication would be positively (negatively) related to employees' commitment, trust, satisfaction, and control mutuality. Asymmetrical communication was significantly related to some of the relationship outcomes. More specifically, asymmetrical communication was significantly related to commitment ($\gamma_{02} = -.17$, p < .01), trust ($\gamma_{02} = -.07$, p < .05), and satisfaction ($\gamma_{02} = -.14$, p < .01) negatively. This means in a company where the internal communication system was asymmetrical, employees tended to have less commitment, trust, and satisfaction. In case of control mutuality, it showed a negative association with asymmetrical communication as expected, but the

Table 25

Intercepts-as-Outcomes Model for Hypotheses 7s

Dependent Variable	γ_{01} (Size)	γ_{02} (Asymmetrical COMM)	γ_{03} (Symmetrical COMM)	γ_{04} (Structure)	U_{0j}
Exchange Relationship	.15*	.04	.09	-.40**	.09**
Communal Relationship	-.11*	-.21**	.17*	-.03	.06**
Commitment	-.07**	-.17**	-.03	-.05	.01*
Trust	-.01	-.07*	.02	.13*	.00
Satisfaction	-.05	-.14**	-.04	-.00	.01**
Control Mutuality	-.07**	-.02	-.01	.14*	.01

* $p < .05$. ** $p < .01$.

Level 1:

Relationship Types/Outcomes = $\beta_{0j} + \beta_{1j}$ (tenure) + β_{2j} (supervisory justice) + β_{3j} (organizational justice) + r_{ij}

Level 2:

$\beta_{0j} = \gamma_{00} + \gamma_{01}$ (size) + γ_{02} (asymmetrical communication) + γ_{03} (symmetrical communication) + γ_{04} (structure) + U_{0j}

$\beta_{1j} = \gamma_{10} + U_{1j}$

$\beta_{2j} = \gamma_{20} + U_{2j}$

$\beta_{3j} = \gamma_{30} + U_{3j}$

where

β_{0j} = mean for relationship type/outcome for group j

β_{1j}, β_{2j}, β_{3j} = slopes for group j

γ_{00} = level 2 intercept

$\gamma_{01}, \gamma_{02}, \gamma_{03}$, and γ_{04} = level 2 slopes (test Hypotheses 7s)

γ_{10}, γ_{20}, and γ_{30} = means of the slopes across groups

r_{ij} = level 1 residual variance (σ^2)

U_{0j} = residual intercept variance (τ_{00})

U_{1j}, U_{2j}, and U_{3j} = variances in slopes (τ_{11}, τ_{22}, τ_{33})

association was not significant ($\gamma_{02} = -.02$, p = .50). None of the relationship outcomes was significantly related to symmetrical communication. Thus, I found partial support for hypothesis 7a.

This finding supports the argument of organization researchers that communication is a predictor of satisfaction (Downs, 1992; Ellingson & Buzzanell, 1999; Ralston, 1993). However, the results did not conform with my original anticipations. Originally, I expected that symmetrical communication would contribute to building positive employee-organization relationships. Unexpectedly, the results showed that symmetrical communication is not significantly related to organizational relationship outcomes. These results are inconsistent with Huang's (1997) finding that symmetrical communication "contributed to the building of a stable, good-quality organization-public relationship" (p. 228). However, asymmetrical communication did have negative associations with commitment, trust, and satisfaction.

I think these results imply that it is imperative for organizations not to communicate asymmetrically with employees if they want their employees to have commitment, trust, and satisfaction. The results showed that symmetrical communication does not guarantee good relationships, but employees' commitment, trust, and satisfaction could be harmed by the asymmetrical communication system.

However, it is possible that these unexpected results are due to Korea's Confucian culture. Confucianism has had a profound impact on Korea. Scholars have suggested that Korea is perhaps the nation in Asia most steeped in Confucian ideology, surpassing China, the founding country of Confucianism (Wei-Ming, 1996; Koh, 1996). In Confucian society, the stability of the society is based on unequal

relationships between people (Hofstede & Bond, 1987). And according to Yoon (2001), Koreans are still highly status-conscious. From the above research, it follows that Korean employees do not expect symmetrical communication with higher people in their companies. Thus, it is possible for Korean organizations to have good relationships with their employees even when they do not have symmetrical communication systems, which provides a justification for the insignificant associations between symmetrical communication and the relationship outcomes of this study.

Hypothesis 7b expected that symmetrical (asymmetrical) internal communication would be positively related to a communal (exchange) relationship. The results of the HLM tests indicated that the hypothesis 7b on a communal relationship was supported. Symmetrical communication was indeed positively related to a communal relationship significantly ($\gamma_{03} = .17$, p < .05). This means employees working for a company with a symmetrical communication system tended to develop communal relationships with the company. But the association between asymmetrical communication and an exchange relationship was not significant even though the direction of the association was predicted appropriately ($\gamma_{02} = .04$, p = .50). Thus, hypothesis 7b was partially supported. This result implies that organizations should use symmetrical communication to build communal relationships with employees.

In the conceptualization chapter, I reasoned that there would be a positive relationship between symmetrical communication and a communal relationship because a communal relationship is more related to high evaluations of the four outcome variables than an exchange relationship. It is interesting to notice that, in this

study, symmetrical communication was positively related to communal relationships, while four relational outcomes did not have significant associations with symmetrical communication. Even though this study did not examine the associations between types of relationships and relationship outcomes, based on the results of the tests of the subhypothesis 7s, I think there is a possibility that the relationships between the two variables are not simple as expected. Communal relationships might not be more related to high evaluations of the four outcome variables than exchange relationships. Employees might perceive positive relational outcomes even when they have exchange relationships with their company. I think further research is needed to examine the associations between types of relationships and relationship outcomes.

Table 25 also provides the results of the test of hypothesis 7c, which predicted that organic (mechanical) structure would be positively (negatively) related to employees' commitment, trust, satisfaction, and control mutuality. The results revealed that structure was significantly related to trust ($\gamma_{04} = .13$, $p < .05$) and control mutuality ($\gamma_{04} = .14$, $p < .05$) positively. Given that a high score for structure designated an organic structure and a low score a mechanical structure, these results showed that an organic organizational structure is positively associated with employees' trust and control mutuality and a mechanical structure is negatively associated with employees' trust and control mutuality. This means employees working for a company that had an organic organizational structure were more likely to perceive trust and control mutuality than employees working for a company having a mechanical structure. But, commitment and satisfaction were not significantly related to structure. Thus, hypothesis 7c was also partially supported.

These results suggest that it is essential for organizations to establish organic structures if they want their employees to perceive trust and control mutuality in employee-organization relationships. Even though the results revealed some implications for the relationships between structure and relational outcomes, they were not consistent with my original expectations. I expected all relationship outcomes to be positively related to organic structures. Unexpectedly, only two relationship outcomes were significantly associated with organizational structure. More research is needed to explore relationships between structure and relational outcomes.

I also found partial support for hypothesis 7d, which predicted that organic (mechanical) organizational structure would be positively related to a communal (exchange) relationship. The association between structure and exchange relationships was significant negatively (γ_{04} = -.40, p < .01). Considering that a low score for structure indicated a mechanical structure, this means there was a positive association between a mechanical structure and an exchange relationship. Thus, employees working for a company that had a mechanical structure tended to have exchange relationships with the company. I could not find a significant association between an organic structure and a communal relationship.

Even though I could not find evidence that an organic structure and communal relationships are significantly related, the results showed that a mechanical structure did have a positive association with exchange relationships. I think these results suggest that organizations should try avoiding establishing mechanical structures because mechanical structures lead employees to develop exchange relationships.

In testing the subhypotheses 7s, I found it interesting that some relationship outcomes were significantly related to organizational contexts while some were not. This shows that organizational structure and internal communication have different impacts on each of four relationship outcomes. I think this result supports Huang's (1997) proposition that organizational relationships are "composed of four separable, but related dimensions" (p. 168). Thus, I argue that relationship outcomes showed different associations with the two organizational contexts because they are independent and separable components of relationships. Further research is needed to explain why some outcomes were significantly related to organizational contexts while others were not.

Even though I could not find full support for the subhypotheses 7s, this study was meaningful in that it tried to find linkages between the proposed antecedents and all relationship dimensions. Previous research focused only one or two separate dimensions of relationships.

In this model, organizational size, the organizational-level control variable, revealed several significant relationships. Size was positively related to exchange relationships significantly ($\gamma_{01} = .15$, $p < .05$), which means employees tended to have rather exchange relationships than communal relationships in a big company. And size was significantly related to communal relationships ($\gamma_{01} = -.11$, $p < .05$), commitment ($\gamma_{01} = -.07$, $p < .01$), and control mutuality ($\gamma_{01} = -.07$, $p < .01$) negatively as I predicted. These results indicated that the bigger a company was, the less likely it was that employees in the company had communal relationships, commitment, and control mutuality. Size did not reveal significant relationships with trust and satisfaction.

The results of the R^2 test showed that the combination of size, asymmetrical communication, symmetrical communication, and structure accounted for 53% of between-group variance in the intercepts in the exchange relationship model and 60% of between-group variance in the intercepts in the communal relationship model. The R^2 test also revealed that each of 50%, 100%, 50%, and 50% of between-group variance in the intercept terms in commitment, trust, satisfaction, control mutuality were respectively accounted for by the combination of size, asymmetrical communication, symmetrical communication, and structure.

Finally, the results of this test suggested that after including the four organizational-level variables, significant unexplained variance still existed in the intercept terms of exchange relationship ($\tau_{00} = .09$, p < .01), communal relationship ($\tau_{00} = .06$, p < .01), commitment ($\tau_{00} = .01$, p < .05), and satisfaction ($\tau_{00} = .01$, p < .01). This indicated that there was significant variance still remaining in the intercept terms of these variables that could be accounted for by other organizational-level predictors.

Summary. The subhypotheses 7s were partially supported. Intercepts-as-outcomes models used to test hypothesis 7a showed that asymmetrical communication was significantly related to commitment ($\gamma_{02} = -.17$, p < .01), trust ($\gamma_{02} = -.07$, p < .05), and satisfaction ($\gamma_{02} = -.14$, p < .01) negatively. This means, in a company where the internal communication system was asymmetrical, employees tended not to have commitment, trust, and satisfaction. In case of control mutuality, it showed a negative association with asymmetrical communication as expected, but the association was not significant ($\gamma_{02} = -.02$, p = .50). None of the relationship outcomes was significantly related to symmetrical communication.

In the test of hypothesis 7b, symmetrical communication was positively related to communal relationships significantly ($\gamma_{03} = .17$, $p < .05$). This means employees working for a company that had a symmetrical communication system tended to develop communal relationships with the company. But the association between asymmetrical communication and an exchange relationship was not significant even though the association direction was predicted appropriately ($\gamma_{02} = .04$, $p = .50$).

In case of hypothesis 7c, structure appeared to be significantly related to trust ($\gamma_{04} = .13$, $p < .05$) and control mutuality ($\gamma_{04} = .14$, $p < .05$) positively. These results showed that organic organizational structure was positively associated with employees' trust and control mutuality and mechanical structure was negatively associated with employees' trust and control mutuality. This means employees working for a company that had an organic organizational structure were more likely to perceive trust and control mutuality than employees working for a company having a mechanical structure. But, commitment and satisfaction were not significantly related to structure.

Lastly, from the hypothesis 7d test, it was shown that the association between structure and exchange relationship was significant negatively ($\gamma_{04} = -.40$, $p < .01$). This means there was a positive association between a mechanical structure and an exchange relationship. Thus, employees working for a company that had a mechanical structure tended to have exchange relationships with the company. I could not find a significant association between an organic structure and communal relationships.

Test of Subhypotheses 6s

Lastly, I tested the subhypotheses 6s about the mediating effect of justice between organizational-level predictor variables and individual-level outcome variables. Hypothesis 6a predicted that the association between organizational structure and employee-organization relationships is partially mediated by organizational justice. On the other hand, hypothesis 6b anticipated that association between internal communication and employee-organization relationships is partially mediated by organizational justice.

According to Kenny, Kashy, and Bolger (1998), a variable (M) mediates the relationship between an antecedent variable (X) and an outcome variable (Y) if: (1) X is significantly related to Y in the absence of M; (2) X is significantly related to M; (3) M is significantly related to Y; and (4) after controlling for M, the X-Y relationship is zero. Because my hypotheses were about partial mediation effects, the hypotheses could be supported if the X-Y relationship drops after controlling for M in the fourth step. Figure 4 shows the procedure that I used to test the subhypotheses 6s.

In Table 26, I present the results of the first step: the relationships between structure/communication and relationship types/outcomes. Because some relationships were not significant, the results provided limited evidence in support of the first step of Kenny et al.'s (1998) procedure for testing mediation. However, Kenny et al. did not consider evidence of a significant X-Y relationship to be essential to tests of mediation. They described the second and third of the steps as "the essential steps in establishing mediation" and added that the first step "is not required, but a

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Step 1

```
┌─────────────────┐
│    Structure    │──────────────────┐
└─────────────────┘                   ╲
                                       ╲──────▶┌──────────────────┐
┌─────────────────┐                   ╱        │   Relationship   │
│  Communication  │──────────────────╱         └──────────────────┘
└─────────────────┘
```

Step 2

```
┌─────────────────┐
│    Structure    │──────────────┐
└─────────────────┘               ╲
                                   ╲───▶┌──────────────┐
┌─────────────────┐               ╱     │    Justice   │
│  Communication  │──────────────╱      └──────────────┘
└─────────────────┘
```

Step 3

```
┌──────────────┐        ┌──────────────────┐
│    Justice   │───────▶│   Relationship   │
└──────────────┘        └──────────────────┘
```

Step 4

```
┌─────────────────┐
│    Structure    │──────────────────┐
└─────────────────┘                   ╲
                                       ╲─────▶┌──────────────────┐
┌─────────────────┐                   ╱       │   Relationship   │
│  Communication  │──────────────────╱        └──────────────────┘
└─────────────────┘                   ╱
                       ┌──────────────┐
                       │    Justice   │
                       └──────────────┘
```
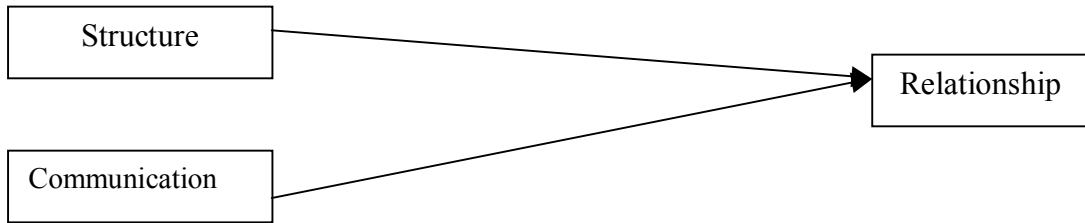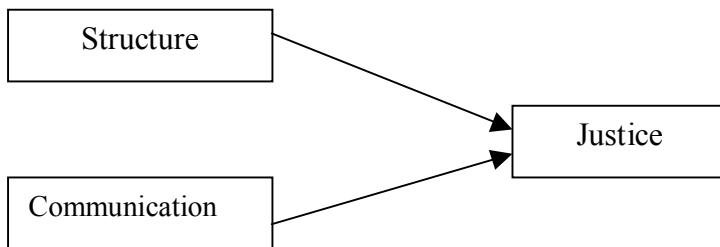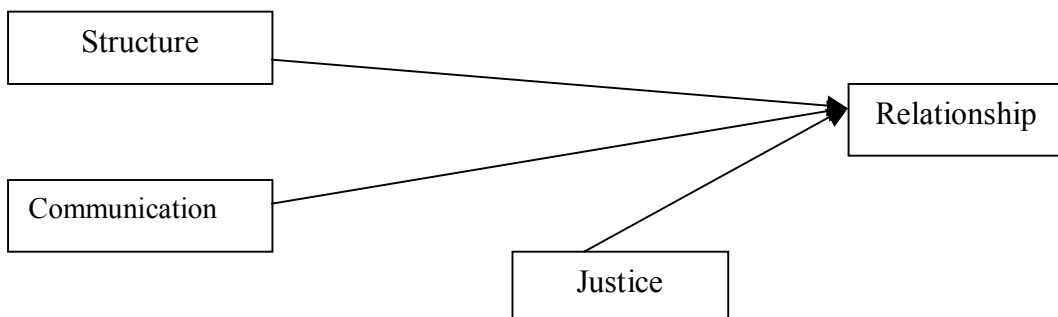
Figure 4. Procedures to test mediation.

path from the initial variable to the outcome is implied if the two middle steps are met" (Kenny et al., 1998, p. 260).

Thus, I continued with the second step of the mediation analysis. The second step involved determining the significant relationships between the structure/communication (Xs) and justice (M). As Table 27 indicates, symmetrical communication and structure were significantly related to organizational justice. Also, symmetrical communication was significantly related to supervisory justice.

Continuing the mediation analysis, I conducted the third step of Kenny et al.'s (1998) recommended procedures. As shown in Table 28 all associations but the one between supervisory justice and exchange relationships were significant. The results in Table 29 also yielded information regarding the fourth step of Kenny et al.'s recommended procedures. After controlling for justice, all associations between antecedents and outcome variables except for exchange relationships declined substantially.

This process revealed that organizational justice mediated the effects of symmetrical communication and structure on relationship variables. But, supervisory justice did not mediate the effects of structure/communication on relationship types/outcomes considering its non-significant coefficients in step 2 and 3.

Also, the mediation effect on the variable of exchange relationships was not supported because its coefficients did not follow the pattern of other variables at the third and fourth steps (i.e., the coefficients did not drop). Lastly, the role of asymmetrical communication as a mediation antecedent was not supported because it did not reveal significant relationships at the second step. In sum, the mediation test results suggested that organizational justice mediated the effects of symmetrical

Table 26

Step 1 of Test of Mediation: The Relationships Between Antecedents Variables and Outcome Variables

Outcome Variables	Antecedents		
	Asymmetrical COMM (γ_{02})	Symmetrical COMM (γ_{03})	Structure (γ_{04})
Exchange Relationship	.17	-.02	-.38**
Communal Relationship	-.34*	.26**	.20
Commitment	-.28**	.06	.14
Trust	-.21*	.14*	.38**
Satisfaction	-.27*	.09	.18
Control Mutuality	-.18**	.12*	.36**

* $p < .05$. ** $p < .01$.

Table 27

Step 2 of Test of Mediation: The Relationships Between Antecedents Variables and

Mediator

Antecedents Mediators	Asymmetrical Communication (γ_{02})	Symmetrical Communication (γ_{03})	Structure (γ_{04})
Organizational Justice	-.17	.18*	.38*
Supervisory Justice	-.12	.17**	.10

* $p < .05$. ** $p < .01$.

Table 28

Step 3 of Test of Mediation: The Relationships Between Mediators and Outcome

Variables

	Mediators	
	Supervisory Justice	Organizational Justice
Outcome	(γ_{20})	(γ_{30})
Variables		
Exchange Relationship	-.03	-.31**
Communal Relationship	.10*	.56**
Commitment	.21**	.51**
Trust	.12**	.64**
Satisfaction	.24**	.52**
Control Mutuality	.10**	.63**

* $p < .05$. ** $p < .01$.

Table 29

Step 4 of Test of Mediation: The Relationships Between Antecedent Variables and Outcome Variables After Controlling for Mediators

	Antecedents		
		Symmetrical	
Outcome Variables	Asymmetrical COMM (γ_{02})	COMM (γ_{03})	Structure (γ_{04})
Exchange Relationship	.04	.09	-.40**
Communal Relationship	-.21*	.17*	-.03
Commitment	-.17**	-.03	-.05
Trust	-.07	.02	.13*
Satisfaction	-.14**	-.04	-.00
Control Mutuality	-.02	.01	.14*

* $p < .05$. ** $p < .01$.

communication and structure on communal relationships and four relationship outcomes. Thus, I found partial support for the subhypotheses 6s.

Previous studies have suggested that fairness mediates individuals' judgments on their work-place relationships (Moorman, Blakely, & Niehoff, 1988). The results of this study partially supported previous research. One way to explain these results may be to consider each variable's characteristic.

Even though the original subhypotheses 6s were only about organizational justice, the role of supervisory justice in mediation needs to be explained. I think it was expected that supervisory justice would not mediate the effects of the antecedents on relationships considering the variable's weak associations with the other variables of this study. Organizational justice was a better predictor of employee-organization relationships than supervisory justice. Also, the antecedents of this study were more related to organizational justice than to supervisory justice. Again, I think this finding supports my argument that organizational justice has more impact on organizational phenomena than supervisory justice.

I think it was also reasonable to find no mediation effects for exchange relationships and asymmetrical communication, considering the variables' negative roles in employee-organization relationships. Actually these two variables were the only two variables which had destructive functions in the antecedent model of this study (see Figure 1). In case of organizational structure, mechanical structure did not play a manifest role in mediation because the structure variable was regarded as a continuum where a high score indicated an organic structure and a low score a mechanical structure. Given that all other variables reflected positive aspects of employee-organization relationships, it makes sense that exchange relationships and

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asymmetrical communication variables could not contribute to the mediation effect of justice.

This finding is intriguing in that it showed that symmetrical communication could contribute to building quality relationships when symmetrical communication was supported and enhanced by fair organizational events. This symmetrical communication-fair treatment-good relationships chain shows a flip side of the associations between symmetrical communication and relational outcomes. In the test of the subhypothesis 7a, I unexpectedly found that none of the relationship outcomes was significantly related to symmetrical communication. I explained that the unexpected results might be due to Korea's Confucian culture.

However, from the results of the tests of the subhypotheses 6s, I found another possible explanation. That is, symmetrical communication alone does not guarantee good employee relationship outcomes. It must be combined with fair behavior by management and fair organizational policies and systems to establish good relationships.

Fair treatment involves good behavior from management and fair organizational policies and systems. In the conceptualization chapter, I wrote that procedural justice is forstered by granting voice in the decision-making processes and making decisions in a manner that is consistent, accurate, and correctable and that suppresses bias. Interactional justice is promoted by dignified and respectful treatment and by adequate and honest explanations (Colquitt & Greenberg, 2003). Thus, I think good relationships result from good organizational behavior (fair treatment) and fair organizational policies and systems, which is initiated by symmetrical communication.

This means symmetrical communication is indirectly related to relational outcomes through the mediating factor of organizational justice.

   Summary. The subhypotheses 6s were partially supported. Organizational justice mediated the effects of symmetrical communication and structure on communal relationships and the four relationship outcomes. These results showed that symmetrical communication and organic structure could contribute to building quality relationships when symmetrical communication and organic structure were combined with fair organizational events. It means that good relationships result from good organizational behavior (fair treatment) and fair policies and systems, which is initiated by symmetrical communication and organic structure. These mediating relationships are presented in Figure 5.
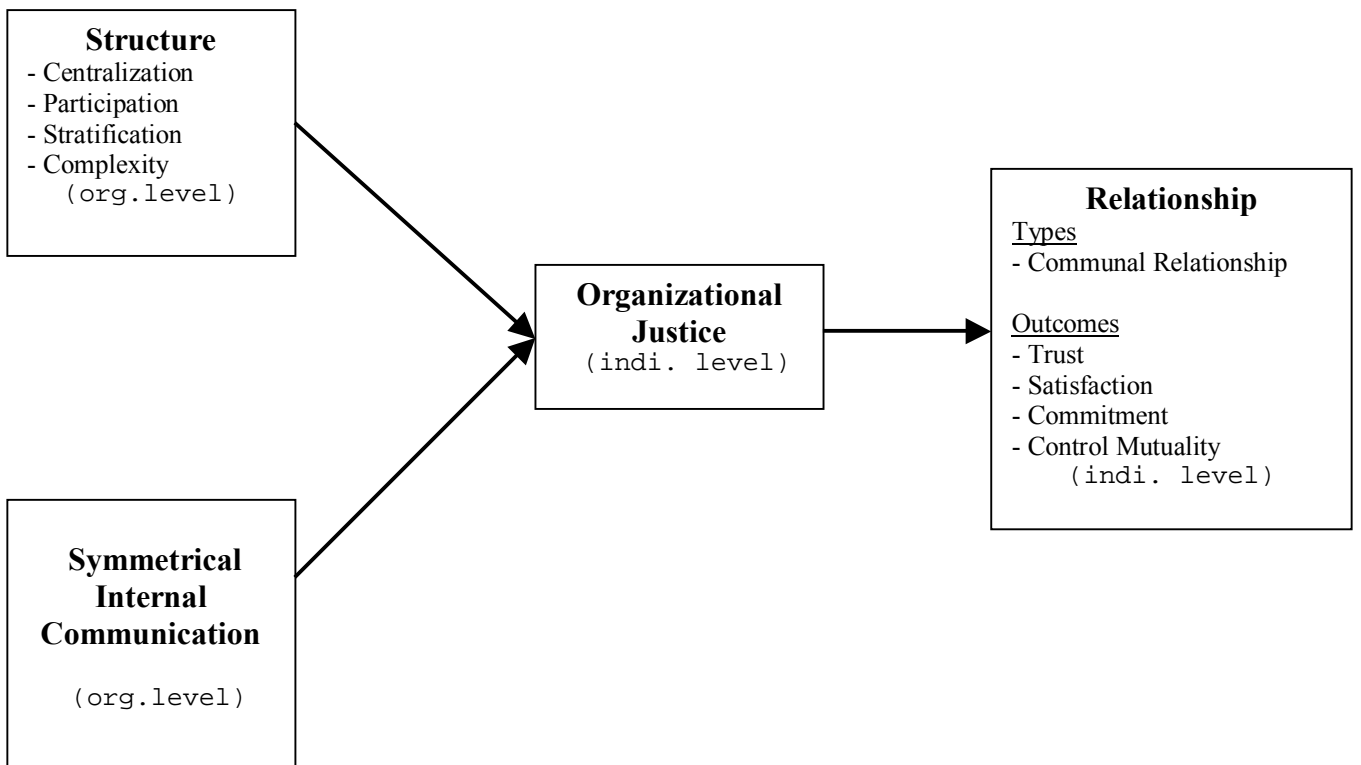
Figure 5. Mediating relationships among the main variables.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to explore possible antecedents of internal relationships in organizations. The influence of organizational structure and internal communication on employee-organization relationships in the context of organizational justice was the primary interest of the study.

More specifically, I sought answers to the following questions: 1) To what extent is organizational structure related to internal communication? 2) To what extent are organizational structure and internal communication related to organizational justice? 3) To what extent is organizational justice related to employee-organization relationships? 4) To what extent are organizational structure and internal communication associated with employee-organization relationships? 5) Does organizational justice mediate the associations between structure/ communication and employee-organization relationships?

This section first summarizes the findings of this study by answering the above questions. Then, the implications for theories and for practitioners are discussed. Finally, I discuss the limitations of this study and provide suggestions for future research.

Summary of Results

Results of Exploratory Factor Analysis and Reliability Test

To assess the reliability and internal consistency of the data, Cronbach's alpha tests were performed. Principal component analysis (PCA), a type of exploratory factor analysis, was also conducted to determine how well the items actually measured the latent variables they were designed to measure. Both of these tests were

conducted with the individual-level data after controlling for group membership (i.e., company membership).

All measurement scales showed acceptable alpha coefficients. Also, for most of the measures, items revealed significant factor loadings, and the pattern of eigenvalues suggested that a one-factor solution would best fit the data. For each measure, I retained those items that loaded higher than .50 on a single factor.

In case of the structure variable, I tried to combine "first for each of the five concepts and then as a single scale in which a high score indicated an organic structure and a low score a mechanical structure" (L. Grunig et al., 2002, p. 503). Items for centralization, stratification, complexity, and participation in decision making loaded on the first factor (eigenvalue was 3.32 with 29.73 % of the variance explained). All formalization items loaded on the second factor (eigenvalue was 1.86 with 16.86 % of the variance explained). Because I was interested in obtaining the strongest single indicator for each latent variable, only the first factor in the factor analysis was selected for all further analysis. Thus, in my further analysis, the eight-item factor was used, and *organic structures* designated the structures that are less centralized, less stratified, and more complex and facilitate participation in decision making.

For internal communication, it was possible to develop a continuum of asymmetrical-symmetrical communication. However, when I conducted the exploratory factor analysis after combining all internal communication items, I found that two factors were extracted. Those two factors clearly represented asymmetrical communication and symmetrical communication respectively.

Also, Pearson's correlation *r* between asymmetrical communication and symmetrical communication (which will be presented later in the descriptive analysis part) was -.45 in the individual level and -.68 in the organizational level. These correlation scores indicated that they are significantly related, but not at a high enough level to suggest that they are the same construct. Thus, I treated asymmetrical communication and symmetrical communication as distinct variables for all further analysis.

Justifying Data Aggregation

I justified aggregation of the organizational-level variables statistically by using r_{wg}, ICC(1), and ICC(2) to ensure that there was a high degree of agreement within each organization on the variables (James, Demaree, & Wolf, 1984). The r_{wg} indices were sufficiently large to justify aggregation. Also, all ICC(1) and ICC(2) scores of the organizational-level variables supported aggregation. The results showed that structure, asymmetrical communication, and symmetrical communication are indeed organizational-level constructs. Based on the above results, I could confirm that the three organizational-level variables could be characterized as a whole and a single value might be sufficient to describe the organization.

Multicollinearity

In analyzing data, the issue of multicollinearity was also addressed. Multicollinearity refers to "strong linear relationship between two or more of the predictors" (Lomax, 2001, p. 62). In this study, the organizational-level correlations among predictors were .58 and -.68. They were not big enough to imply the possibility of multicollinearity. However, I conducted a multicollinearity test to be

sure that the organizational-level independent variables do not actually represent the same latent construct.

I used the variance inflation factor (VIF) method to check multicollinearity. VIF is a statistical method for detecting multicollinearity. The VIF shows how much variance of the coefficient estimate is being inflated by multicollinearity. A commonly given rule of thumb is that VIFs of 10 or higher may be a reason for concern (Lomax, 2001). VIFs were smaller than 2. From the VIF test, I concluded that multicollinearity is not a big problem with the independent variables of this study.

<center>Descriptive Statistics</center>

Organizational Structure and Internal Communication

At the individual-level, the participants in this study reported that mechanical aspects of organizational structure were more pervasive in the 31 organizations than organic aspects of structure. In general, participants of this study seemed to think their organizations were centralized ($M = 4.41$), formalized ($M = 4.18$), and stratified ($M = 4.31$) and did not allow employees to participate in decision making ($M = 3.72$). In case of complexity, the participants estimated that their companies had a medium degree of complexity ($M = 3.99$). The means for asymmetrical communication and symmetrical communication were the same ($M = 3.92$). Asymmetrical communication and symmetrical communication seemed to coexist in the participants' organizations.

Centralization and stratification were significantly correlated positively ($r = .27$, $P < .05$). Complexity and participation in decision making were also positively and significantly correlated ($r = .28$, $p < .05$). Correlations between the above two sets of variables (centralization and stratification *vs*. complexity and participation) were

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negatively significant. Also, asymmetrical communication and symmetrical communication were significantly and negatively correlated (r = -.45, p < .01). These relationships strongly confirmed the theoretical expectations. The rather low and insignificant correlation coefficients of formalization with other structural variables (except for the one with complexity) indicated that formalization and other structural variables are not on the same factor dimension.

At the organizational level, the 31 participating companies essentially had mechanical structures (M = 3.76). The mean score of asymmetrical communication was 3.89 and the mean score of symmetrical communication was 3.95. However, the difference between the two mean scores was not large, so it seemed as though a medium degree of asymmetrical communication and symmetrical communication coexisted in the participating organizations.

The organizational-level correlations showed that organic structures were significantly related to symmetrical systems of internal communication (r = .58, p < .01) and mechanical structures were significantly related to asymmetrical systems of internal communication (r = -.66, p < .01). The correlation between asymmetrical communication and symmetrical communication was negatively significant (r = -.68, p < .01).

Justice and Relationships

The means for the relationship outcome variables showed that the participants basically had good relationships with their companies. The mean scores for each of the four relationship outcomes were as follows: 3.90 for control mutuality, 4.05 for trust, 4.44 for commitment, and 4.60 for satisfaction. Overall, the participants had

high degrees of commitment and satisfaction and a medium degree of trust. Control mutuality was the lowest among four outcome variables.

The participants also believed that their companies and supervisors treated them fairly. The mean scores for justice were as follows: 5.08 for supervisory procedural justice, 4.65 for supervisory interactional justice, 4.37 for organizational procedural justice, and 3.96 organizational interactional justice.

The mean score of exchange relationships was 4.05 and the mean score of communal relationships was 3.89. Thus, the participants seemed to perceive that they had more exchange relationships with their organizations than communal relationships. However, the difference between the two mean scores was not large.

All correlations were significant. It made sense that all correlations were positive, except for the ones with exchange relationships, given that almost all dependent variables described positive aspects of organizations. All correlations between exchange relationships and other dependent variables were negatively significant implying the variable's destructive role in organizations.

Testing Hypotheses

Correlations and regressions were used to test hypothesis 1 because the first hypothesis was about same-level variables (organizational-level). In case of single-level models, once the emergent constructs are raised to the unit level, the unit-level model is straightforward to test using common statistical methods such as correlation analysis and hierarchical regression according to the nature of construct relationships (Kozlowski & Klein, 2000).

With respect to the rest of the hypotheses, I conducted HLM tests. Even though hypotheses 2 and 5 were also about same-level variables (individual-level),

those hypotheses could be appropriately analyzed using the random-coefficient

regression models of HLM, which is the second step in conducting HLM tests.

To What Extent Is Organizational Structure Related to Internal Communication?

Correlation tests revealed significant organizational-level relationships among

independent variables. An organic structure was significantly correlated with

symmetrical communication positively ($r = .58$, $p < .01$) and significantly correlated

with asymmetrical communication negatively ($r = -.66$, $p < .01$), as predicted.

In the regression analyses, the results showed that organizational structure is a

strong predictor of internal communication. Organizations with organic structures had

symmetrical systems of internal communication, and organizations with mechanical

structures had asymmetrical systems of internal communication. The relationships

between organizational structure and internal communication are presented in

Figure 6.

To What Extent Are Organizational Structure and Internal Communication Related to

Organizational Justice?

Intercepts-as-outcomes models in HLM showed that organic structure is

positively related to organizational justice and mechanical structure is negatively

related to organizational justice ($\gamma_{04} = .38$, $p < .05$). Thus, it was shown that

employees working for a company whose structure was organic perceived that they

were treated more fairly than employees working under a mechanical structure.

It was also revealed that symmetrical communication is significantly and

positively associated with organizational justice ($\gamma_{03} = .18$, $p < .05$). This means that

in a company where its communication system was symmetrical, employees were

Structure

Asymmetrical
Communication

Symmetrical
Communication

-.66**

.58**
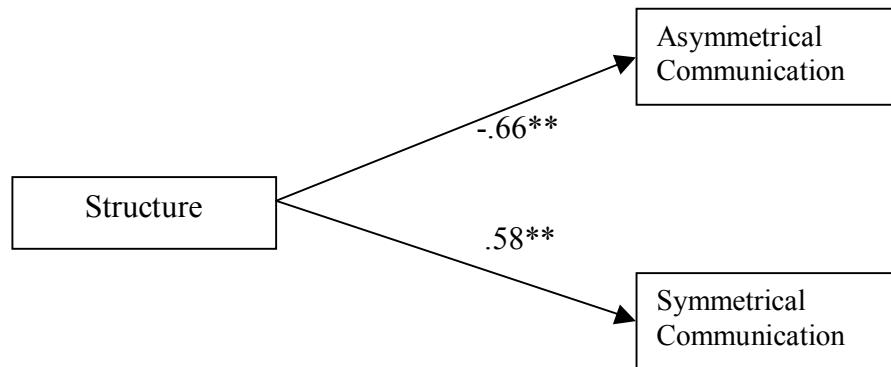
** *p*<.01.

Figure 6. The relationships between organizational structure and internal

communication.

more likely to perceive that they were treated fairly by their company. But, the relationship between asymmetrical communication and organizational justice was not significant even though it showed the anticipated direction (γ_{02} = -.17, p = .10).

With respect to supervisory justice, structure was not significantly related to supervisory justice (γ_{04} = .10, p = .30). Also, the association between asymmetrical communication and supervisory justice was not significant (γ_{02} = -.12, p = .20). However, symmetrical communication was significantly associated with supervisory justice (γ_{03} = .17, p < .01). The relationships among structure, internal communication, and justice are presented in Figure 7.

To What Extent Is Organizational Justice Related to Employee-Organization Relationships?

Random-coefficient regression models in HLM showed that organizational justice (γ_{30} = .56, p < .01) was positively and significantly related to communal relationships. This means employees who perceived that they were treated fairly by their company developed communal relationships with the company. The association between exchange relationship and organizational justice was also significant (γ_{30} = -.31, p < .01), showing the predicted negative direction. That is, employees who perceived that their company was fair were not likely to have exchange relationships with the company.

Organizational justice (γ_{30} = .51, p < .01 for commitment; γ_{30} = .64, p < .01 for trust; γ_{30} = .52, p < .01 for satisfaction; γ_{30} = .63, p < .01 for control mutuality) was significantly and positively related to all of the relationship outcomes. This means, employees who perceived that they were treated fairly by their company believed
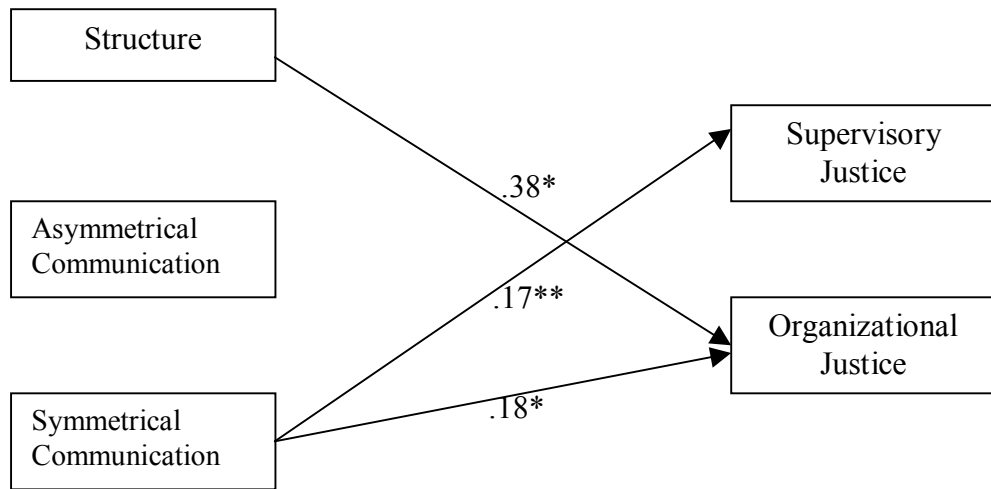
Note. Asymmetrical communication was included in the model for statistical analysis, but there were no significant relationships with other variables.

** *p*<.01. * *p*<.05.

Figure 7. The relationships among structure, internal communication, and justice.

Exchange Relationship

Communal Relationship

Commitment

Trust

Satisfaction

Control Mutuality

Organizational Justice

Supervisory Justice

-.31**

.56**

.51**

.64**

.52**

.63**

.10**

.21**

.12**

.24**

.10**
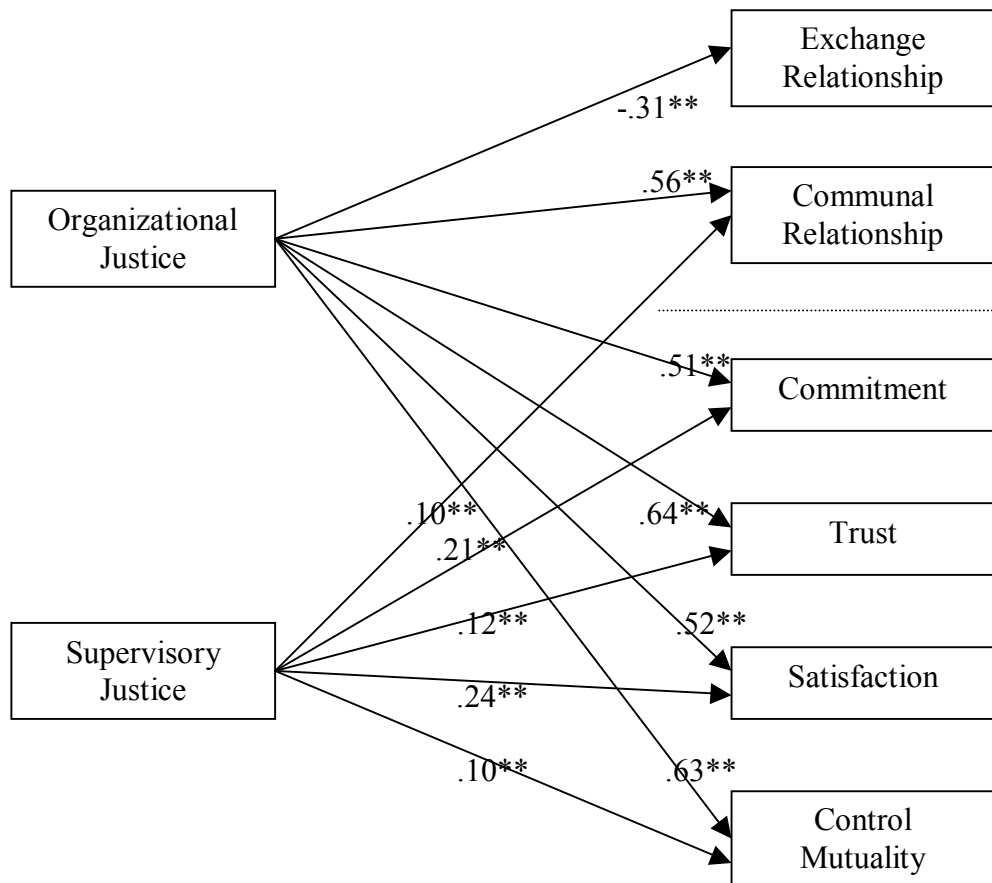
** *p*<.01. * *p*<.05.

Figure 8. The associations among justice, relationship types, and relationship outcomes.

their relationships were characterized by commitment, trust, satisfaction, and control mutuality.

Supervisory justice ($\gamma_{20} = .10$, p < .01) was positively and significantly related to communal relationships. The association between an exchange relationship and supervisory justice was negative as anticipated, but it was not significant ($\gamma_{20} = -.03$, p = .50). Supervisory justice ($\gamma_{20} = .21$, p < .01 for commitment; $\gamma_{20} = .12$, p < .01 for trust; $\gamma_{20} = .24$, p < .01 for satisfaction; $\gamma_{20} = .10$, p < .01 for control mutuality) was significantly related positively to all of the relationship outcomes. The relationships between justice and relationships are presented in Figure 8.

To What Extent Are Organizational Structure and Internal Communication

Associated with Employee-Organization Relationships?

Intercepts-as-outcomes models in HLM showed that asymmetrical communication was significantly related to commitment ($\gamma_{02} = -.17$, p < .01), trust ($\gamma_{02} = -.07$, p < .05), and satisfaction ($\gamma_{02} = -.14$, p < .01) negatively. This means, in a company where the internal communication system was asymmetrical, employees tended not to have commitment, trust, and satisfaction. In the case of control mutuality, there was a negative association with asymmetrical communication as expected, but the association was not significant ($\gamma_{02} = -.02$, p = .50). None of the relationship outcomes was significantly related to symmetrical communication.

Symmetrical communication was positively and significantly related to communal relationships ($\gamma_{03} = .17$, p < .05). This means employees working for a company that had a symmetrical communication system tended to develop communal relationships with the company. But the association between asymmetrical

communication and an exchange relationship was not significant even though the association direction was predicted correctly (γ_{02} = .04, p = .50).

Structure was significantly and positively related to trust (γ_{04} = .13, p < .05) and control mutuality (γ_{04} = .14, p < .05). These results showed that organic organizational structure was positively associated with employees' trust and control mutuality and mechanical structure was negatively associated with employees' trust and control mutuality. This means employees working for a company that had an organic organizational structure were more likely to have trust and control mutuality than employees working for a company that had a mechanical structure. However, commitment and satisfaction were not significantly related to structure.

Lastly, the association between structure and exchange relationships was significant negatively (γ_{04} = -.40, p < .01). This means there was a positive association between a mechanical structure and an exchange relationship. Thus, employees working for a company that had a mechanical structure tended to have exchange relationships with the company. However, I could not find a significant association between an organic structure and communal relationships. The associations among structure, internal communication, and relationships are presented in Figure 9.

Does Organizational Justice Mediate the Associations between Structure/
Communication and Employee-Organization Relationships?

Organizational justice mediated the effects of symmetrical communication and structure on communal relationships and the four relationship outcomes. The results showed that symmetrical communication and organic structure could contribute to building quality relationships when symmetrical communication and organic structure were combined by fair organizational events. It means that good relationships result
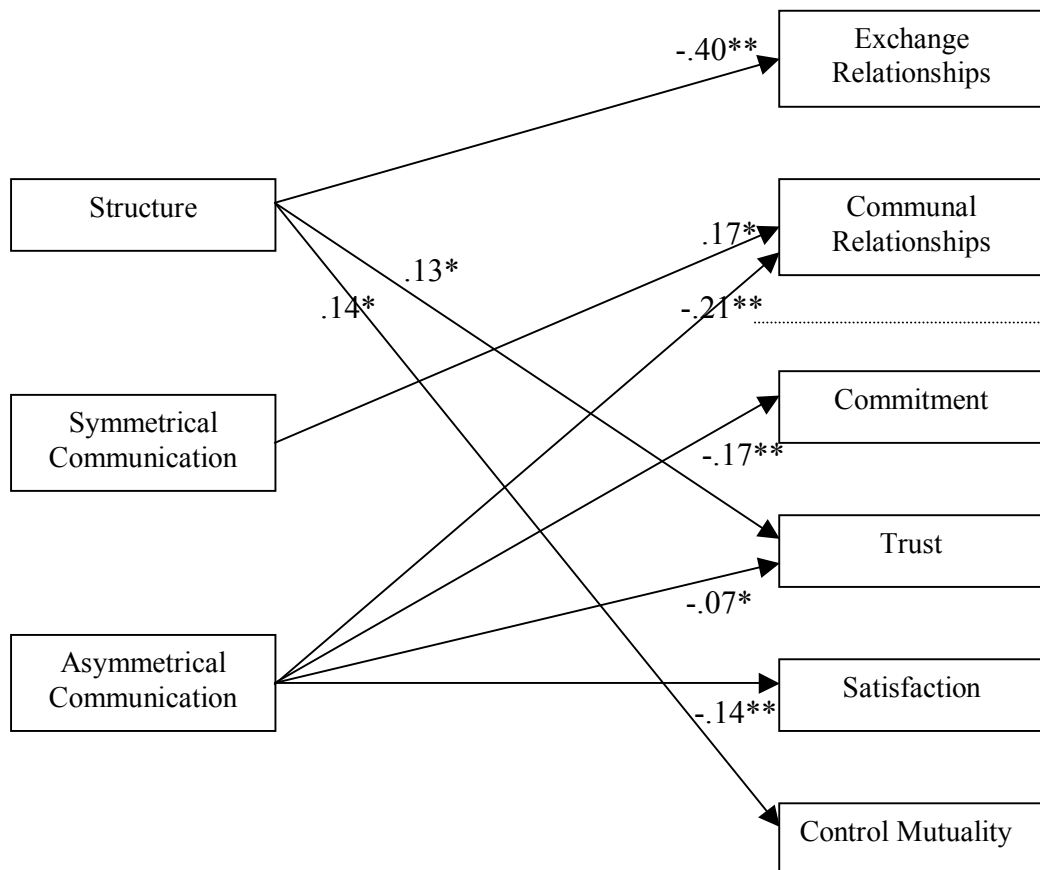
** *p*<.01. * *p*<.05.

Figure 9. The associations among structure, internal communication, relationship types, and relationship outcomes.

from good organizational behavior (just treatment) and fair organizational policies

and systems, which is initiated by symmetrical communication and organic structure.

The results were presented in Figure 5.

Overall, the results of this study showed that organizations could have quality

relationships with employees by establishing organic structures and symmetrical

communication systems, and also by treating employees fairly in organizational

events such as decision making and decision executions.

<div align="center">Implications for Public Relations Theory</div>

This study contributed to public relations theory in the following subjects: 1)

employee relations, 2) antecedents of employee-organization relationships, 3) the

associations between structure/ internal communication and employee relationships,

4) integration of organizational justice theory into public relations research, and 5) the

impact of Korean context.

<div align="center">*Employee Relations*</div>

Employee relationships are the building block of the strategic management of

communication between an organization and its external publics. Rhee (2004)

demonstrated the critical roles that employees play in an organization's relationship-

building process with its external publics. When committed employees go outside of

an organization, their positive attitudes are expected to facilitate the development of

positive relationships with external publics.

On the other hand, good relationships with employees increase the likelihood

that they will be satisfied with the organization and their jobs, which makes them

more likely to support and less likely to interfere with the mission of the organization

(Hon & J. Grunig, 1999). Also, the process of developing and maintaining

relationships with employee publics is a crucial component of strategic management, issues management, and crisis management (Hon & J. Grunig, 1999). Actually, maintaining good relationships with internal publics is one of the major responsibilities of public relations managers (Holtzhausen, 2002).

However, employee relationships have not been in the spotlight of relationship studies. This study tried to fill this gap in relationship research and contributed to public relations theory by examining employee-organization relationships from the perspective of employees. Organizational relationships were measured by examining employees' perceptions. Employees' evaluations of organizational relationships and organizational contexts such as structure and communication revealed under what types of organizational environments employees feel commitment, trust, satisfaction and control mutuality in their relationships with their organizations.

I believe that this study departed from previous relationship studies in that it provided an "employee" perspective to public relations theory. Karlberg (1996) criticized many of the existing studies on public relations as having examined issues from the perspectives of organizations rather than from those of publics. The empirical data collected from the viewpoints of "employee publics" provided valuable information on employee-organization relationships.

Antecedents of Relationships

This study also contributed to public relations theory in that it was an endeavor to develop concrete employee-organization relationship antecedent dimensions. One research direction that is needed but has not been fully exploited in relationship studies is research on the antecedents of relationships. Research on antecedents is imperative in relationship management studies. What makes

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relationships? For what reasons do organizations come to have relationships with publics? What affects the types of relationships and outcomes organizations have with their publics? Public relations scholars need to find answers to the above questions to understand the nature of organizational relationships.

However, little empirical research has been done. Also, there has been little research to examine their nature and functions from the employee relations perspective. To my knowledge, this study marks the first attempt to explore employee-organization relationship antecedents. This study was meaningful in that it empirically demonstrated the influence of concrete employee relationship antecedents such as organizational structure and internal communication on employee-organization relationships.

The Associations Between Structure/Internal Communication

and Employee Relationships

Research has been done about the relationships between the two antecedents of this study (structure and internal communication) and organizational relationships. Thus far, some pioneering research has paid attention to this subject. For example, Hon and J. Grunig (1999) noted that organizations that communicate effectively with publics develop better relationships because management and publics understand one another and because both are less likely to behave in ways that have negative consequences on the interests of the other. In-depth interviews of the Excellence study showed that good communication changes behavior of both management and publics and, therefore, results in good relationships.

J. Grunig (1992c) noted that organizational structure and communication are strongly related to employee satisfaction, which is one of relationship outcomes.

Marlow and O'Connor (1997) also noted that the quality of relationships could be increased by facilitating participation and communication in all directions and overcoming barriers to knowledge sharing.

Also, research has shown that employees who participate in decisions involving them (which is the fifth variable of structure in this study) have higher levels of organizational commitment (Boshoff & Mels, 1995). In an extensive review of the effect of participation on performance, Wagner (1994) concluded that participation could have a statistically significant effect on both performance and satisfaction.

Given that all of the above studies focused on only one or two separate dimensions of relationships, there was a need for a comprehensive study to find linkages between structure/ internal communication and all relationship dimensions. The empirical data of this study helped to demonstrate the relationships between the two antecedents of this study and employee-organization relationships.

Through the effort of examining concrete employee relationship antecedents, this study demonstrated that organizational structure and internal communication are indeed associated with employee-organization relationships. This study was not successful in demonstrating that the two antecedents are related to all relationship types and outcomes. However, there were some significant relationships. Asymmetrical communication was negatively related to employees' commitment, trust, and satisfaction. Also it was shown that symmetrical communication was associated with communal relationships positively. Lastly, organic structure appeared to be negatively related to exchange relationships and positively related to trust and control mutuality. These relationships were presented in Figure 9.

Integration of Organizational Justice Theory Into Public Relations Research

This study contributed to the body of knowledge in public relations by introducing organizational justice theory into relationship theory and by exploring how justice theory can be related to organizational structure and internal communication as well as to employee-organization relationships. I examined the direct and indirect influences of internal communication and structure on employee-organization relationships using organizational justice as a mediating factor.

It was revealed that organizational justice, in fact, was associated with organizational structure and internal communication as well as with employee-organization relationships. Organizational justice also mediated the effects of symmetrical communication and structure on communal relationships and the four relationship outcomes.

This study showed that symmetrical communication and organic structure could contribute to building quality relationships when they were combined with fair behavior by management and fair organizational policies and systems. It means that good relationships result from good organizational behavior (just treatment), which is initiated by symmetrical communication and organic structure.

I think this interdisciplinary effort has a significant implication for employee relationship management. The results showed how organizations can build quality relationships with employees. For example, employers have to develop fair organizational systems in which they treat employees with dignity and give employees an opportunity to have voice or input into the management process. Also, management should treat employees respectfully, providing adequate and honest explanations on decision making. These efforts from management should be the

building block of positive employee relations in organizations. Symmetrical communication without fair behavior is "pseudo symmetrical" communication (J. Grunig, personal communication, November 24, 2004).

This study's interdisciplinary investigation contributed to expanding the scope of public relations theory by importing and integrating justice theory into public relations research. The concept of organizational justice seems to be appropriate for public relations theories because of its constructive and symmetrical theoretical assumptions. Thus, it is needed to explore linkages between organizational justice and other public relations theories. For example, organizations will have better relationships with external publics if the publics think the organizations treat them fairly. Also, it might be possible for organizations to manage crises more efficiently if publics perceive that the organizations treat them fairly.

The Impact of Korean Context

This study was conducted in Korea. The social-cultural-political contexts of Korea must have influenced the participants' perceptions in various ways. The results of this study showed some interesting aspects, which I think were due to Korea's unique social-cultural-political contexts.

First, the mean scores of the main variables showed that Korean organizations had more negative organizational contexts than Western organizations. In the Excellence study, L. Grunig et al. (2002) reported that 327 participating organizations, which were recruited from Western countries such as Canada, United States, and United Kingdom, were shown to have symmetrical than asymmetrical systems of communication. The means of the structure items also showed that organic structure was more common in the sample than mechanical structure.

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In this study, at the organizational level, the 31 participating companies had moderately mechanical structures ($M = 3.76$). The mean score of asymmetrical communication was 3.89 and the mean score of symmetrical communication was 3.95. However, the difference between the two mean scores was not large. Hence, a medium degree of both asymmetrical communication and symmetrical communication seemed to coexist in the participating organizations. I think these results show that Korean organizations are more bureaucratic than Western organizations.

Second, I think the construct of structure must have reflected Korean organizations' unique charactersitics. In the exploratory factor analysis, I found that items for centralization, stratification, complexity, and participation in decision making loaded on the first factor and all formalization items loaded on the second factor. This result might be due to South Korea's unique social contexts and cultural norms. Formalization represents "the importance of rules and the degree to which they are enforced in the organization" (L. Grunig et al., 2002, p. 485). Many Korean organizations emphasize the importance of rules (Yoon, 2001). People usually think there should be rules in organizations and that the rules should be enforced in the organizations. Thus, Korean organizations tend to be formalized whether they are big or small, or whether they are new or old. Therefore, it is likely that formalization exists in organic organizations as well as in mechanical organizations. I reason that this unique aspect of Korean organizations might have influenced the factor of organizational structure.

Third, the results of this study showed that symmetrical communication was not significantly associated with any of the four relational outcomes. It is possible that

these unexpected results are due to Korea's Confucian culture. Confucianism has had a profound impact on Korea. Scholars have suggested that Korea is perhaps the nation in Asia most steeped in Confucian ideology, surpassing China, the founding country of Confucianism (Wei-Ming, 1996; Koh, 1996). In Confucian society, the stability of the society is based on unequal relationships between people (Hofstede & Bond, 1987). And according to Yoon (2001), Koreans are still highly status-conscious. From the above research, it follows that Korean employees do not expect symmetrical communication with higher people in their companies. Thus, it is possible for Korean organizations to have good relationships with their employees even when they do not have symmetrical communication systems, which provides a justification for the insignificant associations between symmetrical communication and the relationship outcomes of this study.

These results imply that Korea's unique social-cultural-political contexts might have influenced the relationships among the main constructs of this study. It is necessary to replicate this research in countries with different social-cultural-political contexts from Korea's to further cross-validate the results obtained from the study.

Implications for Public Relations Practice

This study also shed light on the issue of how to develop good employee relationships in a real organizational setting, thus contributing to public relations studies from a practical perspective.

Conditions for Positive Employee Relationships

This study demonstrated that organizational structure and internal communication were indeed antecedents of some dimensions of employee-organization relationships. Especially, organic structure and symmetrical internal

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communication facilitated the development of positive employee-organization relationships. It was also revealed that a fair organizational system in which management treat employees with dignity and give employees an opportunity to have voice or input into the management process is a necessary condition for quality employee relationships.

I think this study suggested that an organic structure, a symmetrical communication system, and a fair organizational system should be first established to create positive employee-organization relationships. Thus, public relations practitioners and management should start building quality relationships with employees by changing their organization's structures as well as internal communication systems with a strategic perspective. Also, organizations should try to establish a fair organizational system. This suggestion is consistent with J. Grunig's (1992c) argument that communication by itself cannot change organizations. Public relations professionals must intervene in the process of structuration as well as communication.

On the other hand, it is necessary to train and educate management and public relations managers about the importance of organic structures, symmetrical communication systems, and fair organizational systems. Unless dominant coalitions and public relations managers recognize the important roles that the above three organizational contexts play in employee relationships, research on relationships like this would never be beneficial to public relations practice. If the public relations department carries out formal training sessions to instruct management regarding the significance of organic structures, symmetrical communication systems, and fair systems, it will allow companies to initiate positive organizational contexts at a more

macro level rather than having to resort to individual managers' competence (Hon & Grunig, 1999). I think this study was meaningful in that it showed how organizations can initiate positive employee relationships.

Strategies to Build Positive Employee Relationships

Findings of this study provide public relations professionals and dominant coalitions with insights about how to build positive employee relationships. As the study showed, organizational structure, internal communication, and justice play important roles in building quality relationships with employees. The roles of the main variables of this study in employee-organization relationships are presented in Table 31. Public relations practitioners can use Table 30 as a guideline to get information on what kind of strategies they need to draw on to build high-quality relationships with employees.

For example, Table 31 shows that it is essential to establish an oranic structure and a fair organizational system to avoid exchange relationships. It also shows that to increase employees' satisfaction, organizations need to avoid an asymmetrical communication system. Supervisors and the organization as a whole also need to treat employees fairly.

Implications for Justice Theory

This study has some significant implications for justice theory. It contributed to the following topics: 1) sources of fairness, 2) justice and relationship research, and 3) antecedents and outcomes of justice.

Table 30

Strategies for Positive Employee-Organization Relationships

Resulting Outcomes	Strategies				
	Asymmetrical Communication	Symmetrical Communication	Organic Structure	Supervisory Justice	Organizational Justice
Exchange Relationship			−		−
Communal Relationship	−	+		+	+
Commitment	−			+	+
Trust	−		+	+	+
Satisfaction	−			+	+
Control Mutuality			+	+	+

Sources of Fairness

One path within justice research has sought to "determine the sources of fairness" (Rupp & Cronpanzano, 2002, p. 926). That is, to whom or to what are employees attributing acts of fairness? According to Rupp and Cronpanzano, the current work in this area suggests that employees face at least two sources of justice: one's immediate supervisor or manager and the organization as a whole. I think this study has a significant implication for justice research in that the results showed employees indeed do differentiate the sources of fairness. The participants of this study showed that they attributed fairness to their immediate supervisors and to the organization distinguishably. This result supports Rupp and Cropanzano's argument that employees attribute fairness to the organization as a whole as well as to their direct supervisors.

Organizational researchers have used a micro-level approach and have thought that employees attribute justice perceptions only to their immediate supervisor. However, the result of this study indicated that justice theory can be expanded from an individual-level attribution to an organizational-level attribution.

Justice and Relationship Research

The results of this study showed that organizational justice has more impact on organizational relationships than supervisory justice. The descriptive statistics revealed that the survey participants thought their supervisors treated them more fairly than their companies (see Table 18). However, the magnitudes of the associations between organizational justice and relationships (γ_{30} = -.31 for exchange relationship; γ_{30} = .56 for communal relationship; γ_{30} = .51 for commitment; γ_{30} = .64 for trust; γ_{30} = .52 for

satisfaction; and $\gamma_{30} = .63$ for control mutuality) were consistently much larger than the ones between supervisory justice and relationships ($\gamma_{20} = -.03$ for exchange relationship; $\gamma_{20} = .10$ for communal relationship; $\gamma_{20} = .21$ for commitment; $\gamma_{20} = .12$ for trust; $\gamma_{20} = .24$ for satisfaction; and $\gamma_{20} = .10$ for control mutuality). This means organizational justice has much more impact on relationship types and outcomes than supervisory justice. Also, organizational contexts (structure and internal communication) were more related to organizational justice than to supervisory justice. Thus, I suggest that organizational justice is a more appropriate type of justice to be integrated into organizational relationship research than supervisory justice.

Antecedents and Outcomes of Justice

Cropanzano and Greenberg (1997) noted that although the research on organizational justice is voluminous, at its core, the research generally addresses one of three questions: (1) Why do people care about justice? (2) What affects justice judgments? and (3) What outcomes are associated with justice judgments? This study was meaningful in that it could help answer two of the above three questions by applying justice theory to public relations. Organizational structure and internal communication form the organizational context that often affects justice judgments. Also commitment, trust, control mutuality, and satisfaction, and two types of relationships can be outcomes that are closely associated with organizational justice.

This study contributed to justice research by paying attention to the organizational context such as structure and internal communication as a means of enhancing organizational justice. Justice literature has mainly examined the issue of antecedents of

justice based on attributes of outcomes, procedures, and interpersonal treatment. However, this study demonstrated that structure and internal communication can influence employees' perceptions of organizational justice. Justice research can advance its body of knowledge by understanding the role of the organizational context in which justice judgments are made.

<center>Implications for Public Relations Research Methodology</center>

This study also has implications for the methodology of public relations research. First, by introducing multilevel analysis, I tried to expand the scope of analytical methods public relations researchers can adopt. This study was a typical example of multilevel research in that it gathered and summarized individual-level data to operationalize organizational-level constructs such as organizational structure and internal communication. According to Klein and Kozlowski (2000), when researchers collect data from individuals to research organizational constructs, the levels issue is unavoidable. In the absence of careful theoretical work and subsequent statistical analyses, higher-level findings using data gathered in lower levels are likely to be illusory (James, 1982).

Recalling Klein et al.'s (1994) convincing argument that no construct is level free in organizational research, I came to realize that many public relations studies, especially the ones that deal with internal organizational relationships, cannot avoid being the subject of multilevel analysis. However, levels issues have not surfaced in public relations research. This study tried to fill this gap by adopting the multilevel analysis method from organizational studies.

Second, I also minimized the effects of single-source bias by measuring independent and dependent variables from different participants. P. Podsakoff, MacKenzie, Lee, and N. Podsakoff (2003) noted that a method bias can occur when a respondent providing the measures of the predictor and criterion variable is the same person. In this study, to minimize single-source response bias, some of the participants completed the communication and structure items, and others completed the justice and relationship items. By doing so, this study contributed to advancing methodological developments in public relations research.

Limitations of This Study

Although this study contributed to the relationship research in a number of ways, it also has its limitations. In this study there were two limitations that stemmed from the research site of the study.

First, because I conducted this study in Korea, the findings from this study may not generalize to other settings. Even though the main purpose of this study was not to explore the impact of the social-cultural-political variables on employees' perceptions of relationships, as I wrote in the delimitation section, the social-cultural-political contexts must have influenced the participants' perceptions in various ways. I suspect some unexpected findings such as the dimensions of organizational structure (formalization was extracted as a different factor) and no significant associations between symmetrical communication and relationship outcomes might be due to Korea's specific social-cultural-political contexts. Thus, the fact that I could not control Korea's social-cultural-

political impacts on the main variables of this study would be a major limitation of this study.

Second, I used Western measurement instruments and translated them into Korean for data collection. Although a pretest was conducted to assure the appropriateness of translation, language still was a difficulty in questionnaire translation. Also, cultural differences might have influenced the respondents' perceptions of the concepts conveyed in the questionnaires. I have to admit that the questionnaires might be literally translated and cultural factors might be involved and have certain impacts. Thus, the questionnaires of this study have the risks of reliability and validity resulting from both language problems and cultural implications.

Directions for Future Research

This study examined antecedents of employee-organization relationships. I think this study can serve as an adequate starting point for further research on organizational relationships. The following research directions are suggested.

First, a critical next step should be to examine relationship cultivation strategies. Relationship cultivation strategies have been studied minimally by public relations scholars, like relationship antecedents. Building favorable relationships with publics is just a beginning. Later on, public relations practitioners come to face a more challenging task: how to cultivate good relationships with publics. In fact, *cultivating* good relationships with publics might be the essence of relationship management because it is the factor which is most likely to influence organizational purposes and outcomes. Thus, more theoretical and empirical research on relationship cultivation is needed if public

relations scholars and practitioners want their efforts to build favorable relationships with publics to be effective.

Second, relationship outcomes need to be further examined. Even though relationship outcomes are the area that has been most researched in relationship studies, there still exists a need to investigate relationship outcomes, especially outcomes beyond individual perceptions. Thus far, most research on relationship outcomes examined individuals' perceptions such as commitment, trust, satisfaction, and control mutuality. If building favorable relationships between an organization and its publics really contributes to desirable organizational outcomes such as organizational effectiveness and increased organizational profits and sales, public relations researchers need to provide evidence to support the relationship. Also, it is essential to measure publics' changed attitudes and behaviors as a result of public relations practitioners' efforts to build and maintain positive relationships. Masterson et al. (2000) showed that social exchange relationships (i.e., communal relationships) are the direct antecedents of employees' attitudes and behaviors.

Third, other possible antecedents of employee-organization relationships should be examined. The results of the subhypotheses 7s tests suggested that after including the four organizational-level predictors (size, asymmetrical communication, symmetrical communication, and structure), significant unexplained variance still existed in the intercept terms of exchange relationship (τ_{00} = .09, p < .01), communal relationship (τ_{00} = .06, p < .01), commitment (τ_{00} = .01, p < .05), and satisfaction (τ_{00} = .01, p < .01) (see Table 25). This indicated that there was significant variance still remaining in the

intercept terms of these variables that could be accounted for by other organizational-level predictors. Also, antecedents of other types of relationships, for example, relationships with external publics, need to be examined.

Fourth, more research is also needed to answer why some outcomes were significantly related to the antecedents of this study and others were not. In testing the subhypotheses 7s, some relationship outcomes were significantly related to organizational structure and internal communication while some were not. This showed that organizational structure and internal communication have different effects on each of the four relationship outcomes. I think this result supports Huang's (1997) proposition that organizational relationships are "composed of four separable, but related dimensions" (p. 168). Thus, I argue that relationship outcomes showed different associations with organizational structure and internal communication because they are independent and separable components of relationships. Further research is needed to explain why some outcomes were significantly related to organizational contexts while others were not.

However, there is also a possibility that the above results were due to Korea's specific social-cultural-political contexts, as I discussed in the limitation section. Thus, fifth, replication procedures are critical to further cross-validate the results obtained from this study. Another logical step next would be to conduct research in countries with different social-cultural-political contexts from Korea's, for example in the United States or in European countries. Also, examining cultural differences in relationship

antecedents, cultivation strategies, and outcomes will be a welcoming addition to

relationship research.

APPENDIX A

Questionnaire A

Questionnaire #: _____

This questionnaire was constructed to learn more about organizations, how people work, and how employees feel about their workplaces. This questionnaire is a part of Ms. Hyo-Sook Kim's doctoral dissertation project at the Department of Communication, at the University of Maryland. The dissertation project is being conducted on Ms. Kim's personal budget, not associated with any kind of outside funds at all. The insights that you contribute will enhance the body of knowledge about public relations practice, especially employee relations. This study will also be of tremendous help in Ms. Kim's pursuit of a PhD in Communication.

Your response will be used only for research purposes, and all information collected in the study will remain anonymous. Participation is voluntary, and no one in your company will ever know how (or even whether) you respond. If you have any questions, please contact Ms. Hyo-Sook Kim. Her email address is khs728@hotmail.com and phone number is 031-717-2317.

Please try to answer every question, even if you are not sure about or confident of your answer. To answer each item, circle the number that corresponds most closely with your opinion. Although some of the questions in this questionnaire may sound similar, please respond to each carefully because they ask for slightly different information. It may take up to 30 minutes to complete the questionnaire.

Thank you very much, in advance, for completing this questionnaire.

TURN THE PAGE TO BEGIN

Internal Communication and Organizational structure

1. The first set of items describes ways in which communication
   takes place in companies. Using the following scale, please
   choose a number to indicate the extent to which you agree that
   each of the items in this section describes your company
   accurately.

1	2	3	4	5	6	7
Strongly Disagree						*Strongly Agree*

The purpose of communication in our company is to get employees to behave in the way top management wants us to behave.	1	2	3	4	5	6	7
Most communication in our company is one-way: from management to other employees.	1	2	3	4	5	6	7
Employees seldom get feedback when we communicate to managers.	1	2	3	4	5	6	7
In our company, management uses communication to control employees.	1	2	3	4	5	6	7
Managers here are not interested in hearing employee suggestions regarding ways to improve company performance.	1	2	3	4	5	6	7
Most communication between managers and other employees in our company can be said to be two-way communication.	1	2	3	4	5	6	7
Our company encourages differences of opinion.	1	2	3	4	5	6	7
The purpose of communication in our company is to help managers to be responsive to the problems of other employees.	1	2	3	4	5	6	7
Supervisors encourage employees to express differences of opinion.	1	2	3	4	5	6	7
Employees are usually informed about major changes in policy that affect our job before they take place.	1	2	3	4	5	6	7
Employees are not afraid to speak up during meetings with supervisors and managers.	1	2	3	4	5	6	7

2. Next, the second set of items is about the way responsibility and power are allocated, and work procedures are carried out, among your company members. Please choose a number on the same scale to indicate the extent to which you agree that each of the following items describes your company accurately.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

In our company, important decisions generally are made by a few top managers alone rather than by people throughout the company.	1	2	3	4	5	6	7
Employees have a great deal of freedom in making decisions about our work without clearing those decisions with people at higher levels of the company.	1	2	3	4	5	6	7
It is difficult for a person who begins in the lower ranks of our company to move up to an important supervisory position within about 10 years.	1	2	3	4	5	6	7
In our company, there are clear and recognized differences between superiors and subordinates. These differences can be seen in larger offices, quality of office furniture, close-in parking spaces, or frequency of superiors and subordinates having lunch together.	1	2	3	4	5	6	7
Our company has a printed company chart.	1	2	3	4	5	6	7
Everyone in our company follows the company chart closely.	1	2	3	4	5	6	7
Employees' actual work deviates from a written job description for our position.	1	2	3	4	5	6	7
Employees must keep reading, learning, and studying almost every day to do our job adequately.	1	2	3	4	5	6	7
In our company, employee education is needed to do our job adequately.	1	2	3	4	5	6	7
Employees do not have personal influence on decisions and policies of our company	1	2	3	4	5	6	7
Employees have a say in decisions that affect our jobs.	1	2	3	4	5	6	7

* Finally, there are a few questions about you and your company.

1. Are you a:

   a. _____ Male
   b. _____ Female

2. Your age is _____

3. Your highest level of education in any field is:

   a.   High school diplima.
   b.   College diploma.
   c.   Master's or PhD degree.

4. Check the item that best describes your supervisory
   responsibilities.

   a.   I am mostly supervised by others.
   b.   I don't supervise others but work with little
   c.   supervision from others.
   c.   I am a first-line manager.
   d.   I am a middle manager.
   e.   I am a senior manager.

5. How long have you been working for your company?
   _____Years.

              Thank you. That completes the questionnaire.

APPENDIX B

Questionnaire B

Questionnaire #: _____

This questionnaire was constructed to learn more about organizations, how people work, and how employees feel about their workplaces. This questionnaire is a part of Ms. Hyo-Sook Kim's doctoral dissertation project at the Department of Communication, at the University of Maryland. The dissertation project is being conducted on Ms. Kim's personal budget, not associated with any kind of outside funds at all. The insights that you contribute will enhance the body of knowledge about public relations practice, especially employee relations. This study will also be of tremendous help in Ms. Kim's pursuit of a PhD in Communication.

Your response will be used only for research purposes, and all information collected in the study will remain anonymous. Participation is voluntary, and no one in your company will ever know how (or even whether) you respond. If you have any questions, please contact Ms. Hyo-Sook Kim. Her email address is khs728@hotmail.com and phone number is 031-717-2317.

Please try to answer every question, even if you are not sure about or confident of your answer. To answer each item, circle the number that corresponds most closely with your opinion. Although some of the questions in this questionnaire may sound similar, please respond to each carefully because they ask for slightly different information. It may take up to 30 minutes to complete the questionnaire.

Thank you very much, in advance, for completing this questionnaire.

TURN THE PAGE TO BEGIN

Organizational Justice and Employee-Organization Relationships

1. Your supervisor has to make lots of decisions on a daily basis. For the following items, think about how your supervisor makes decisions that affect you.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Strongly Disagree   Strongly Agree

	1	2	3	4	5	6	7
I can count on my supervisor to have fair policies.	1	2	3	4	5	6	7
Where I work, my supervisor's procedures and guidelines are very fair.	1	2	3	4	5	6	7
My supervisor does not have any fair policies.	1	2	3	4	5	6	7
The procedures my supervisor uses to make decisions are not fair.	1	2	3	4	5	6	7
My supervisor keeps me informed of why things happen the way they do.	1	2	3	4	5	6	7
My supervisor's decisions are made out in the open so that everyone always knows what's going on.	1	2	3	4	5	6	7
My supervisor treats me with dignity and respect.	1	2	3	4	5	6	7
Whether the outcome is good or bad, I always feel like I am kept informed by my supervisor.	1	2	3	4	5	6	7
I feel my supervisor holds me in high regard.	1	2	3	4	5	6	7
My supervisor makes it clear to me that I am a valuable employee.	1	2	3	4	5	6	7
My supervisor does not care how I am doing.	1	2	3	4	5	6	7

2. The second series of questions asks about the extent to which you perceive organizational events in your company as being fair. Now you have to think about your company as a whole. Using the following scale, please choose a number that indicate how much each statement applies to your company.

1	2	3	4	5	6	7
To a small extent						To a large extent

	1	2	3	4	5	6	7
This company's procedures and guidelines are very fair.	1	2	3	4	5	6	7
The procedures this company uses to make decisions are not fair.	1	2	3	4	5	6	7
I can count on this company to have fair policies.	1	2	3	4	5	6	7
We don't have any fair policies at this company.	1	2	3	4	5	6	7
This company makes it clear to me that I am a valuable employee.	1	2	3	4	5	6	7
I am kept informed, by this company, of why things happen the way they do.	1	2	3	4	5	6	7
Whether the outcome is good or bad, I always feel like I am kept informed by this company.	1	2	3	4	5	6	7
This company treats me with dignity and respect.	1	2	3	4	5	6	7
This company's decisions are made out in the open so that everyone always knows what's going on.	1	2	3	4	5	6	7
Whether right or wrong, this company always explains decisions to me.	1	2	3	4	5	6	7
I feel this company holds me in high regard.	1	2	3	4	5	6	7
This company doesn't care how I am doing.	1	2	3	4	5	6	7

3. Now, please think about a type of relationship you have with your company. Using the following scale, please choose a number that indicates how much each statement applies to a relationship that you have with your company.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

Whenever this company gives or offers something to me, it generally expects something in return.	1	2	3	4	5	6	7
Even though I might have had a relationship with this company for a long time, it still expects something in return whenever it offers me a favor.	1	2	3	4	5	6	7
This company will compromise with me when it knows that it will gain something.	1	2	3	4	5	6	7
This company takes care of me because I am likely to reward the company.	1	2	3	4	5	6	7
This company does not especially enjoy giving me aid.	1	2	3	4	5	6	7
This company is very concerned about my welfare.	1	2	3	4	5	6	7
I feel that this company takes advantage of people who are vulnerable.	1	2	3	4	5	6	7
I think that this company succeeds by stepping on me.	1	2	3	4	5	6	7
This company helps me without expecting anything in return.	1	2	3	4	5	6	7

4. Please choose a number on the same scale to indicate the extent to which you agree that each of the following items describe your company accurately.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Strongly Disagree   Strongly Agree

This company and I are attentive to what each other say.	1	2	3	4	5	6	7
This company believes my opinions are legitimate.	1	2	3	4	5	6	7
In dealing with me, this company has a tendency to throw its weight around.	1	2	3	4	5	6	7
This company really listens to what I have to say.	1	2	3	4	5	6	7
The management of this company gives me enough say in the decision-making process.	1	2	3	4	5	6	7
Whenever this company makes an important decision, I know it will be concerned about me.	1	2	3	4	5	6	7
This company can be relied on to keep its promises.	1	2	3	4	5	6	7
I believe that this company takes my opinions into account when making decisions.	1	2	3	4	5	6	7
I feel very confident about this company's skills.	1	2	3	4	5	6	7
This company does not have the ability to accomplish what it says it will do.	1	2	3	4	5	6	7
I feel that this company is trying to maintain a long-term commitment to me.	1	2	3	4	5	6	7
I can see that this company wants to maintain a relationship with me.	1	2	3	4	5	6	7
There is no long-lasting bond between this company and me.	1	2	3	4	5	6	7
Compared to other organizations, I value my relationship with this company more.	1	2	3	4	5	6	7
I would rather work together with this company than not.	1	2	3	4	5	6	7
I am happy with this company.	1	2	3	4	5	6	7
Both the organization and I benefit from the relationship.	1	2	3	4	5	6	7

I am not happy in my interactions with this company.	1	2	3	4	5	6	7
Generally speaking, I am pleased with the relationship this company has established with me.	1	2	3	4	5	6	7
I enjoy dealing with this company.	1	2	3	4	5	6	7

* Finally, there are a few questions about you and your company.

   1. Are you a:

      a. _____ Male
      b. _____ Female

   2. Your age is _____

   3. Your highest level of education in any field is:

      a.   High school diplima.
      b.   College diploma.
      c.   Master's or PhD degree.

   4. Check the item that best describes your supervisory
      responsibilities.

      a.   I am mostly supervised by others.
      b.   I don't supervise others but work with little
      c.   supervision from others.
      c.   I am a first-line manager.
      d.   I am a middle manager.
      e.   I am a senior manager.

   5. How long have you been working for your company?
      _____Years.

        Thank you. That completes the questionnaire.

APPENDIX C

설문지 A

질문지 번호 :

안녕하십니까?

이 설문지는 직원들이 자신들과 회사의 관계에 대해
어떻게 평가하는지를 알아보기 위해
작성되었습니다.
이 설문지는 또한 미국 매릴랜드 대학 커뮤니케이션 학과에
재학중인 김효숙씨의 박사 논문 자료 수집의 일환입니다.
여러분은 이 설문에 응답함으로써
"회사-직원 관계"에 대한 PR 분야 연구에 기여하게 될 것입니다.

일부 항목들은 비슷한 내용을 중복해서 질문하는 것 같아 보이나,
사실은 모두 조금씩 다른 정보를 얻기 위해 고안됐으니,
세심히 주의를 기울여 모든 항목에 답해 주시기 바랍니다.

설문의 응답 내용은 대학에서 연구의 목적으로만 활용되며,
응답자 개인의 신분이나 응답결과는 절대로 노출되지 않을 것입니다.
잠시 시간을 내어 설문에 응답해 주시면 감사하겠습니다.
혹시 설문 작성시 문의사항이 있으시면 아래 연구자에게 연락 주십시오.
감사합니다.

연구자: 매릴랜드 대학 제임스 그루닉 교수 (jg68@umd.edu), 매릴랜드 대학
박사과정 김효숙 (khs728@hotmail.com)

1. 아래의 항목은 여러분 회사내에서 어떻게 회사-직원 간에 커뮤니케이션이 이루어지는가에 관한 것입니다. 각각의 항목에 대해 여러분이 동의하는 바를 1 점부터 7 점까지의 숫자중 골라 ○표로 표시해 주십시오.

1	2	3	4	5	6	7
전혀 그렇지 않다					매우 그렇다	

우리회사내 커뮤니케이션의 목적은 경영진이 원하는 대로 직원들을 움직이려는 데 있다.	1	2	3	4	5	6	7
우리 회사내 커뮤니케이션은 대부분 일방적 (one-way) 이다: (경영진 -> 직원)	1	2	3	4	5	6	7
우리 부하 직원들은 상사로 부터 피드백을 잘 받지 못한다.	1	2	3	4	5	6	7
우리회사의 경영진은 주로 직원들을 통제 (control) 하기 위해 커뮤니케이션을 한다.	1	2	3	4	5	6	7
우리회사내 상사들은 부하 직원들이 업무능률 향상을 위해 제안하는 것들을 들으려 하지 않는다.	1	2	3	4	5	6	7
우리회사내 상사 - 부하직원간 커뮤니케이션은 주로 쌍방향 (two-way) 이다.	1	2	3	4	5	6	7
우리회사는 다양한 의견을 존중한다.	1	2	3	4	5	6	7
우리 회사내 커뮤니케이션의 목적은 상사로 하여금 부하직원들이 직면한 문제에 관심을 기울이게 하는 것이다.	1	2	3	4	5	6	7
우리회사내 상사들은 부하직원들의 다양한 의견을 존중한다.	1	2	3	4	5	6	7
우리 직원들은 사전에 미리, 회사내 주요 정책의변화에 대해 언질을 받는다.	1	2	3	4	5	6	7
우리 직원들은 상사와의 회의중 자기 자신의 의견을 개진하는 것을 두려워하지 않는다.	1	2	3	4	5	6	7

2. 두번째 항목들은 여러분의 회사내에서 어떻게 권력과 책임이 배분되고 있는지, 또 어떤 절차에 따라 업무가 수행되는지에 관한 것들입니다. 각각의 항목에 대해 여러분이 동의하는 바를 1 점부터 7 점까지의 숫자중 골라 ○표로 표시해 주십시오.

1	2	3	4	5	6	7
전혀 그렇지 않다					매우 그렇다	

우리 회사 내 중요한 의사결정은 주로 소수의 경영진에 의해 내려지고, 직원들은 참여할 수 없다.	1	2	3	4	5	6	7
우리 직원들은 고위 간부의 결제를 받지 않고서도 자율적으로 의사결정을 할 수 있다.	1	2	3	4	5	6	7
우리회사에서, 하위직급으로 입사한 직원이 10 년 안에 주요 임원으로 진급하는 것은 힘들다.	1	2	3	4	5	6	7
우리 회사내에는, 상사와 부하직원 간의 대우에 분명한 차이가 존재한다. 예를 들면 상사들이 더 넓은 사무실을 가지고, 더 좋은 가구를 사용하거나, 더 편리한 주차시설을 가지고 있다.	1	2	3	4	5	6	7
우리 회사에서는 업무분담이 확실하게, 공식적으로 이루어지고 있다.	1	2	3	4	5	6	7
우리 모든 직원들은 회사가 지시한 업무분담을 따르고 있다.	1	2	3	4	5	6	7
우리 직원들의 실제 업무는 회사에서 지시한 업무분담과 별로 다르지 않다.	1	2	3	4	5	6	7
우리 직원들은 늘 독서하고 공부해야 업무를 제대로 처리할 수 있다.	1	2	3	4	5	6	7
우리 회사에서 업무를 제대로 처리 하기 위해서는 직원 교육을 받아야 한다.	1	2	3	4	5	6	7
우리 직원들은 회사의 주요 의사 결정에 개인적인 영향력을 발휘할 수 없다.	1	2	3	4	5	6	7
우리 직원들은 우리의 업무에 영향을 끼치는 주요 의사 결정에 참가할 수 있다.	1	2	3	4	5	6	7

* 마지막으로 응답자 여러분 개인신상에 관해 여쭙겠습니다.

1. 성별은? --- 1) 남자(   )   2) 여자(   )

2. 연령은 만으로 몇 세 이신가요? --- 만 (   )세

3. 최종학력은? --- 1) 고졸이하(   )   2) 대학졸업(   )   3) 대학원졸(   )

4. 귀하의 관리 업무 영역은 다음중 어느 것입니까?
       1) 전혀 관리 업무를 하지 않는다.
       2) 관리 업무를 하지 않지만, 상사의 관리를 받지도 않는다.
       3) 나는 신참 관리자이다.
       4) 나는 중간급 관리자이다.
       5) 나는 고위급 관리자이다.

5. 근무년수? (   )년

수고 많으셨습니다. 다시 한번 진심으로 설문에 응해주셔서 감사드립니다.

APPENDIX D

설문지 B

질문지 번호 :

안녕하십니까?

이 설문지는 직원들이 자신들과 회사의 관계에 대해
어떻게 평가하는지를 알아보기 위해
작성되었습니다.
이 설문지는 또한 미국 매릴랜드 대학 커뮤니케이션 학과에
재학중인 김효숙씨의 박사 논문 자료 수집의 일환입니다.
여러분은 이 설문에 응답함으로써
"회사-직원 관계"에 대한 PR 분야 연구에 기여하게 될 것입니다.

일부 항목들은 비슷한 내용을 중복해서 질문하는 것 같아 보이나,
사실은 모두 조금씩 다른 정보를 얻기 위해 고안됐으니,
세심히 주의를 기울여 모든 항목에 답해 주시기 바랍니다.

설문의 응답 내용은 대학에서 연구의 목적으로만 활용되며,
응답자 개인의 신분이나 응답결과는 절대로 노출되지 않을 것입니다.
잠시 시간을 내어 설문에 응답해 주시면 감사하겠습니다.
혹시 설문 작성시 문의사항이 있으시면 아래 연구자에게 연락 주십시오.
감사합니다.

연구자: 매릴랜드 대학 제임스 그루닉 교수 (jg68@umd.edu), 매릴랜드 대학
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1. 응답자 여러분의 상사는 매일 업무와 관련된 수많은 의사 결정들을 내립니다. 아래의 항목에 대해, 어떻게 여러분의 직장 상사가 여러분에게 영향을 끼치는 의사결정들을 하는지 생각해 보시기 바랍니다. 각각의 항목에 대해 여러분이 동의하는 바를 1점부터 7점까지의 숫자중 골라 ○표로 표시해 주십시오.

	1	2	3	4	5	6	7
	전혀 그렇지 않다						매우 그렇다

나는 나의 상사가 공정한 원칙을 갖고 있다고 믿는다.	1	2	3	4	5	6	7
나의 상사는 업무를 공정하게 처리한다.	1	2	3	4	5	6	7
나의 상사는 어떠한 공정한 원칙도 갖고 있지 않다.	1	2	3	4	5	6	7
내 상사가 업무를 처리하는 과정은 공정하지 않다.	1	2	3	4	5	6	7
내 상사는 일이 "왜" 그렇게 처리되는지 설명해준다.	1	2	3	4	5	6	7
내 상사는 의사결정 과정을 공개해, 모든 부하 직원들이 무슨 일이 벌어지고 있는지 알게 해준다.	1	2	3	4	5	6	7
내 상사는 나를 존중해 준다.	1	2	3	4	5	6	7
업무의 결과가 좋든 나쁘든, 내 상사는 항상 나에게 업무와 관련된 정보를 제공해 준다.	1	2	3	4	5	6	7
나는 내 상사가 나를 높게 평가해 준다고 느낀다.	1	2	3	4	5	6	7
내 상사는 내가 소중한 직원이라는 것을 분명히 해준다.	1	2	3	4	5	6	7
내 상사는 나에게 관심이 없다.	1	2	3	4	5	6	7

2. 두번째 항목들은 응답자 여러분이 여러분의 회사에서 벌어지는 있는 일들에 대해 어떻게 인식하는지에 관한 질문입니다. 이제 여러분은 여러분의 회사 전반에 대해 생각해 보셔야 합니다. 사실, 이 두번째 항목의 질문들은 첫번째 항목과 같습니다. 다만 여러분의 인식의 대상이 상사에서 회사 전체로 바뀌었을 뿐입니다. 그 점을 명심하시고, 아래 각각의 항목에 대해 여러분이 동의하는 바를 1 점부터 7 점까지의 숫자중 골라 ○표로 표시해 주십시오.

1	2	3	4	5	6	7
전혀 그렇지 않다					매우 그렇다	

이 회사의 절차와 방침은 공정하다.	1	2	3	4	5	6	7
이 회사가 의사결정을 내리는 과정은 공정하다.	1	2	3	4	5	6	7
나는 이 회사가 공정한 원칙을 갖고 있다고 믿는다.	1	2	3	4	5	6	7
이 회사에는 어떠한 공정한 원칙도 없다.	1	2	3	4	5	6	7
이 회사는 내가 소중한 직원이라는 것을 분명히 해준다.	1	2	3	4	5	6	7
이 회사는 일이 "왜" 그렇게 처리되는지 설명해 준다.	1	2	3	4	5	6	7
업무의 결과가 좋든 나쁘든, 이 회사는 항상 나에게 업무에 대한 정보를 제공해 준다.	1	2	3	4	5	6	7
이 회사는 나를 존중해 준다.	1	2	3	4	5	6	7
이 회사는 의사 결정 과정을 공개해, 모든 직원들이 무슨일이 벌어지고 있는지 알게 해준다.	1	2	3	4	5	6	7
옳건 그르건, 이 회사는 항상 회사내 주요 의사결정에 대해 설명해 준다.	1	2	3	4	5	6	7
나는 이 회사가 나를 높게 평가해 준다고 느낀다.	1	2	3	4	5	6	7
이 회사는 나에게 관심이 없다.	1	2	3	4	5	6	7

3. 이제 응답자 여러분과 여러분의 회사와의 관계에 대해 생각해 보십시오. 각각의 항목에 대해 여러분이 동의하는 바를 1점부터 7점까지의 숫자중 골라 ○표로 표시해 주십시오.

1	2	3	4	5	6	7
전혀 그렇지 않다					매우 그렇다	

이 회사는 나에게 무엇인가를 줄 때, 일반적으로 대가를 바라지 않는다.	1	2	3	4	5	6	7
내가 이 회사와 장기적인 관계를 맺고 있어도, 이 회사는 여전히 도움을 줄 때마다 뭔가 대가를 기대한다.	1	2	3	4	5	6	7
이 회사는 얻는 것이 있을 때에만 나와 타협할 것이다.	1	2	3	4	5	6	7
이 회사는 내가 회사에 이익을 줄 것 같기 때문에 나를 돌봐준다.	1	2	3	4	5	6	7
이 회사는 나를 도와주는 것을 좋아한다.	1	2	3	4	5	6	7
이 회사는 나의 복지에 대단히 관심이 많다.	1	2	3	4	5	6	7
나는 이 회사가 약한 사람들을 이용한다고 느낀다.	1	2	3	4	5	6	7
나는 이회사가 나늘 짓밟으면서 성공해 왔다고 생각한다.	1	2	3	4	5	6	7
이 회사는 대가로 바라는 것 없이 나를 도와준다.	1	2	3	4	5	6	7

4. 위와 같은 7점 척도를 사용해 응답자 여러분이 다음의 항목들에 대해 동의하는 정도를 표시해 주십시오.

1	2	3	4	5	6	7
전혀 그렇지 않다					매우 그렇다	

이 회사와 나는 서로의 의견에 대해 관심을 갖는다.	1	2	3	4	5	6	7
이회사는 내 의견이 합당하다고 생각한다.	1	2	3	4	5	6	7
이회사는 자신의 방식만을 주장하는 경향이 있다.	1	2	3	4	5	6	7
이 회사는 나의 말을 진심으로 경청한다.	1	2	3	4	5	6	7
이 회사의 경영진은 의사결정을 할 때, 직원들이 충분히 의견을 개진할 수 있게 해준다.	1	2	3	4	5	6	7
이 회사는 중요한 의사결정을 내릴 때 마다, 나에대해 염려하고 관심을 가질 것이다.	1	2	3	4	5	6	7
이 회사는 약속한 바를 지킨다.	1	2	3	4	5	6	7
이 회사는 의사 결정을 할 때 나의 의견을 고려한다.	1	2	3	4	5	6	7
나는 이 회사의 능력에 대해 매우 확신한다.	1	2	3	4	5	6	7
이 회사는 성취하고자 하는 것을 이룰 만한 능력을 지니고 있다.	1	2	3	4	5	6	7
이 회사는 나와 장기적으로 헌신적인 관계를 맺으려고 노력한다	1	2	3	4	5	6	7
이 회사는 나와 관계를 맺고 싶어한다.	1	2	3	4	5	6	7
이 회사와 나 사이에는 장기적이고 지속적인 유대가 형성되어 있지 않다.	1	2	3	4	5	6	7
다른 기업이나 단체들에 비해, 나는 이 회사와의 관계를 더욱 소중하게 여긴다.	1	2	3	4	5	6	7
나는, 이 회사를 그만두기 보다는, 이 회사에서 일하는 편을 택하겠다	1	2	3	4	5	6	7
나는 이 회사에서 일할 수 있어 행복하다.	1	2	3	4	5	6	7

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이 회사와 나 모두가 서로 맺고 있는 관계를 통해 혜택을 받는다.	1	2	3	4	5	6	7
나는 이 회사와 형성된 관계에 만족하지 않는다.	1	2	3	4	5	6	7
일반적으로 말해, 나는 이 회사가 나와 맺고 있는 관계에 대해 만족한다.	1	2	3	4	5	6	7
나는 이회사에서 일하는 것을 즐긴다.	1	2	3	4	5	6	7

＊ 마지막으로 응답자 여러분 개인 신상에 관해 여쭙겠습니다.

1. 성별은? ---   1) 남자(   )   2) 여자(   )

2. 연령은 만으로 몇 세 이신가요? --- 만 (   )세

3. 최종학력은? ---   1) 고졸이하(   )   2) 대학졸업(   )   3) 대학원졸(   )

4. 귀하의 관리 업무 영역은 다음중 어느 것입니까?
        1)   전혀 관리 업무를 하지 않는다.
        2)   관리 업무를 하지 않지만, 상사의 관리를 받지도 않는다.
        3)   나는 신참 관리자이다.
        4)   나는 중간급 관리자이다.
        5)   나는 고위급 관리자이다.

5. 근무년수? (   )년

수고 많으셨습니다. 다시 한번 진심으로 설문에 응해주셔서 감사드립니다.

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