THE RELATIONSHIP AMONG ORGANIZATIONAL JUSTICE, TRUST, AND ROLE BREADTH SELF-EFFICACY

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(Abstract)

The purpose of this study was to examine whether organizational practices—fairness (also known as organizational justice) and trust—contribute to the enhancement of role breadth self-efficacy (RBSE), a form of proactive behavior. The sample consisted of 226 white-collar professionals in large and small organizations. Approximately 70% held a college degree.

An *a priori* path model based on theoretical literature was generated to represent causal relationships among the variables. Two paths were explored: a) the relationship among procedural justice, trust in organization, and RBSE; and b) the relationship among interactional justice, trust in supervisor, and RBSE.

Findings indicated a statistically significant relationship between procedural justice and trust in organization. The relationships between procedural justice and RBSE and trust in organization and RBSE were not significant. Interactional justice had a statistically significant relationship with trust in supervisor, but not with RBSE. The relationship between trust in supervisor and RBSE was not significant. Respondents expressed a strong trust in their organization, and a stronger trust in their immediate supervisor.

The most important discovery in this study was the statistically significant relationship between education and RBSE. Individuals with graduate degrees reported the highest level of RBSE, followed by people with Bachelor's degrees. Globalization and technology are fueling demands for ever-increasing employee skills and higher levels of education. Organizations need highly educated, proactive individuals in order to be successful. Future research should continue to investigate variables and constructs that may enhance RBSE in the workplace.

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CHAPTER I

INTRODUCTION

Important changes in organizational structures and practices have been taking place over the past several decades that are having a profound effect in the workplace. According to the U. S. Department of Labor (Herman, 1999), globalization continues to expand, bringing new opportunities to some segments of the American economy while decreasing opportunities in other segments. Employee diversity is becoming commonplace with minority and immigrant workers occupying a larger percentage of the workforce. Hierarchical management is being replaced by flatter work arrangements in which workers have greater autonomy and authority over their work. Self-directed work teams are being established to deal with work on a project-by-project basis. Team member composition changes are based on project goals and competencies needed for achieving optimal results on each project. Individual employees are expected to address and solve problems on their own that in the past were handled either by management or by personnel with special training. Alternative work arrangements in which organizations utilize independent contractors, part-time employees, subcontractors, and teleworking are increasing (U.S. Department of Labor, 1999).

Rapidly advancing technology is also generating sweeping changes in organizations, and the effects are far-reaching. "The rapid computerization and networking of American businesses, industries, and homes is a *microprocessor revolution* that is fundamentally transforming the way—and the speed with which—people think, connect, ... make transitions—in short do business" (Herman, 1999a, p. 60).

In concert with these changes, organizations have increasingly greater expectations for workers to become self-regulating and self-managing (Bassi, 1998; Boyett & Conn, 1992; Carnevale, Gainer & Meltzer, 1990; Lawler, 1994; Locke & Latham, 1994; Luthans & Davis, 1979; Naisbitt & Aburdene, 1990). According to Kegan (1994), today's workers are expected: a) to invent their own work; b) to be self-initiating, self-correcting, self-evaluating; and c) to take responsibility for what happens to them at work (Kegan 1994). Lawler (1994) states: "In a rapidly changing environment... individuals need to rapidly change what they are doing and in some cases, to change the skills that they have in order to perform in new and different ways"

(Lawler, 1994, p. 5). In response to these increased demands, employees need to be more proactive in the workplace.

Proactive Behavior

According to Crant (2000), there are four broad constructs to conceptualize proactive behavior in the workplace—proactive personality, personal initiative, taking charge, and role breadth self-efficacy (RBSE). The four constructs overlap conceptually in that they are characterized by *employees' initiation of action* in a variety of situations to improve things in the workplace. "Employees can engage in proactive activities as part of their in-role behavior in which they fulfill basic job requirements. Extra-role behaviors can also be proactive, such as efforts to redefine one's role in the organization" (Crant, 2000, p. 436).

Proactive personality and personal initiative describe behavioral dispositions, while taking charge and RBSE describe context dependent behavior (Table 1.1). Dispositional behavior is characterized by stability in which behavior is stable across varying situations. Context dependent behavior, on the other hand, varies depending upon contextual situations. However "both dispositional and situational approaches share the perspective that people can alter the situations in which they find themselves" (Crant, 2000, p.456).

Table 1.1

Proactive Behavior Constructs

Constructs	Description
Behavioral Disposition	
Proactive personality	Stable personal disposition in which employees take action to effect environmental change
Personal initiative	Individuals are self-starting and go beyond formal job requirements
Contextual Behavior	
Taking charge	Improvement-oriented effort by employees to effect how work is executed
Role breadth self-efficacy	Perceived capability to proactively perform extra-role tasks and to change as the environment changes

The distinction between dispositional behavior and behavior that varies with contextual situations is important. The stability of dispositional behavior across varying situations makes it less likely to be influenced by external factors. Behavior that varies by context, on the other hand, is susceptible to influence by external factors. The constructs in this study are contextual. Therefore, proactive personality and personal initiative are eliminated from consideration.

RBSE and taking charge were both considered for this study. Taking charge is change-oriented and aimed at improvement. However, "it entails behavior that deviates from prescribed roles and, consequently, may be viewed as threatening by peers or supervisors. Thus, an employee who is trying to bring about improvement may actually incite disharmony and tensions that will detract from performance" (Morrison & Phelps, 1999, p. 416). The potential adverse effect of taking charge eliminates this construct from consideration in this study.

Parker (1998) recently introduced RBSE, a construct defined as "the extent to which people feel confident that they are able to carry out a broader and more proactive role, beyond traditional prescribed technical requirements" (p. 835). She found that RBSE can be shaped and changed by environmental and organizational experiences. The contextual nature of RBSE allows for an examination of variables that may enhance its development.

RBSE

Key components of RBSE include employee proactivity on the job, interpersonal skills, and integrative skills. Interpersonal and integrative skills are part of RBSE because employees are frequently required to communicate and integrate activities across departments. Interpersonal and integrative skills include problem solving, customer service, goal setting, conflict resolution, and making presentation. RBSE is measured through a short self-report survey in which individuals identify personal confidence in their ability to engage in interpersonal tasks and integrated activities across jobs and hierarchical levels (Parker, 1998).

The focus of RBSE is on what people *feel* they can do rather than on what they *do* (Parker 1998). RBSE is consistent with Bandura's (1997) conceptualization of self-efficacy—"a belief in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Efficacy beliefs are important to human motivation because they influence "the courses of action people choose to pursue, how much effort they put forth, and how long they will persevere in the face of obstacles" (Bandura, 1997, p. 3).

Parker (1998) conducted two studies, one cross-sectional and one longitudinal. Specifically, she found that "employees were more likely to take on additional tasks when they were informed, listened to, and encouraged to speak" (Parker, 1998, p. 849). High quality workplace communication of this nature implies a willingness by the organization and/or supervisor to provide fair treatment by allowing input from employees.

Additionally, job enrichment was found to be particularly effective as an organizational intervention to promote RBSE (Parker, 1998). "Job enrichment involves expanding jobs 'vertically' to increase responsibility for making decisions" (Hackman & Oldham, 1976; as cited in Parker, 1998, p. 837). This vertical expansion includes greater autonomy and decision-making concerning how the various sets of tasks are to be performed. "Autonomy also means that employees are likely to feel increased personal control over their environment and perceived control is recognized as a critical determinant of self-efficacy" (Bandura, 1986: Bandura & Wood, 1989; as cited in Parker, 1998, p. 837). Job enrichment, like quality workplace communication, implies a trusting relationship between employees and organizations and/or their immediate supervisors that is fostered by fair treatment.

Social Exchange Theory, Norm of Reciprocity, and RBSE

RBSE has a high level of dependence on socialization; therefore, it is appropriate to consider social exchange theory and the norm of reciprocity for potential constructs that may influence the development of RBSE. Blau (1964) describes social exchanges as interactions between two individuals in which one party does another a favor with the expectation of a favor in return, although no time period for this reciprocation is specified. Social exchange involves trusting that the other party will fulfill their obligations (Blau, 1964).

The norm of reciprocity dictates that when an employee receives fair treatment from his or her supervisor or organization, he or she is obligated to reciprocate (Gouldner, 1960). Konovsky and Pugh (1994), in harmony with social exchange theory and the norm of reciprocity, identify "fairness and trust as two important situational factors critical to social exchange" (Konovsky & Pugh, 1994, p. 657). An employee has one social exchange relationship with the organization and another social exchange relationship with his or her immediate supervisor (Masterson, Lewis, Goldman, & Taylor, 2000).

Social exchange theory, the norm of reciprocity, and Parker's (1998) findings described above regarding workplace communication and job enrichment, all point to fairness and trust as constructs having potential relevance regarding RBSE. Accordingly, fairness and trust are described in greater detail below. Research on the role of fairness in the workplace has been termed "organizational justice" (Donovan, Drasgow, & Munson, 1998). Justice and fairness will be used interchangeably from here forward.

Organizational Justice

Organizational justice is a multi-dimensional construct composed of three dimensions—distributive justice, procedural justice, and interactional justice. Table 1.2 provides a greater description of each dimension.

Table 1.2

Three Organizational Justice Dimensions

Justice Dimension	Description
Distributive justice	Refers to employees' perceptions of the rewards employees receive such as pay or promotions
Procedural justice	Refers to employees' perceptions of the formal procedures that are used to determine the rewards
Interactional justice	Refers to employees' perceptions of the fairness of how the procedures are put into action

Research related to organizational justice has been taking place for more than three decades. "Organizational justice is concerned with the ways in which employees determine if they have been treated fairly in their jobs and the ways in which those determinations influence other work-related variables" [Moorman, 1991, p. 845].

Brockner (1996) describes the organizational justice research as occurring in three waves. Initially, research focused on distributive justice—the fairness of employee rewards such as pay and promotions. Next, research shifted to procedural justice—the fairness of the processes used

to determine and distribute the rewards. The current research is focusing on the interactive effects of distributive and procedural justice [Brockner, 1996].

Distributive justice and procedural justice are fairly well accepted as distinct constructs (Cropanzano & Prehar, 1999; Konovsky, 2000), while a distinction between procedural justice and interactional justice is not widely accepted (Bobocel & Holmvall, 2001; Cropanzano & Ambrose, 2001). Bies (2001) argues that interactional justice and procedural justice are separate constructs because "there is consistent evidence that interactional justice and procedural justice affect behavior variables differently" (Bies, 2001, p. 99). Malatesta and Byrne (1997) found that employees' procedural justice perceptions were positively related to organizational commitment and employees' interactional justice perceptions were related to behaviors directed at the supervisor (Malatesta & Byrne, 1997). Other studies also found differing antecedents and consequences of procedural justice and interactional justice (Cropanzano & Prehar, 1999; Moye, Bartol, & Masterson 1997; Schminke, Ambrose, & Cropanzano 2000).

Organizational justice measures and measurement practices have been called into question (Greenberg, 1990; Lind & Tyler, 1988). "Measurement of organizational justice has often been poor and inconsistent" (Colquitt, 2001, p. 387). For example, some researchers have used one-item measures and others have used measures without any evidence of construct validity (Greenberg, 1990). Colquitt (2001) points out that in Moorman's (1991) measure of procedural and interactional justice, several items purported to measure interactional justice in fact measure procedural justice. In contrast, Bobocel and Holmvall (2001) state that both of Moorman's (1991) multiple-item scales, tapping procedural justice and interactional justice, are consistent with a two-dimensional model. They argue for additional research in order to make a final determination (Bobocel & Holmvall, 2001).

While the debate continues regarding procedural justice and interactional justice as being one or two-dimensional, I believe there are several good reasons to treat them as if they are separate dimensions. First, empirical evidence points to different correlates for each (Cropanzano & Prehar, 1999; Folger & Konovsky, 1989; Malatesta & Byrne, 1997; Masterson et al. 2000; Moorman, 1991). Second, "people themselves make a distinction between issues related to procedural justice and issues related to distributive justice" (van den Bos, Lind, Vermunt, & Wilke, 1997; van den Bos, Wilke, & Lind, 1998; Greenberg 1986; and Sheppard & Lewicki,

1987; as cited in van den Bos, Lind, & Wilke, 2001, p. 63). Finally, Moorman (1991) constructed the most comprehensive and most frequently used measure of procedural and interactional justice (Colquitt, 2001).

Trust

Trust is a multi-dimensional construct (Hart, Capps, Cangemi, & Caillouet, 1986) that is grounded in social exchange theory (Blau, 1964) and the norm of reciprocity (Gouldner 1960). Social exchange relationships have been conceptualized in the management literature in two main ways: a) a global exchange relationship between employees and the organization, and b) a dyadic relationship between subordinates and their superiors.

Research related to trust and organizational variables includes: work performance (Early, 1986), citizenship behavior (Deluga, 1994; McAllister, 1995), communication (Butler & Cantrell, 1994; O'Reilly & Anderson, 1980; Penley & Hawkins, 1985), empowerment (Gomez & Rosen, 2001), and leader behavior (Podsakoff, MacKenzie, Moorman, & Fetter, 1990), commitment and innovation (Ruppel & Harrington, 2000), and psychological climate (Strutton, Toma, & Pelton, 1993).

Research related to trust in a dyadic relationship includes initial trust formation (Zand, 1972, 1996), the relationship between a trustor and a trustee (Mayer, Davis, & Schoorman, 1995), and managerial trustworthiness (Whitener, Brodt, Korsgaard, & Werner, 1998).

Trust evolves slowly starting with minor transactions in which individuals demonstrate their trustworthiness through discharge of obligations. Gradual expansion of mutual service and reciprocation generate expanding mutual trust (Blau 1964). When employees believe the organization values their contributions and cares about their well-being, they feel an obligation to reciprocate in a manner that helps the organization achieve its goals. In turn, employees trust that the organization will fulfill its exchange obligations (e.g., rewarding employees) (Settoon, Bennett, & Liden, 1996).

The dyadic relationship is intertwined with mutual trust (Bauer & Green, 1996). Managers have higher quality relationships with employees they trust in comparison with employees they do not trust (Dansereau, Graen, & Haga, 1975). Trusted employees receive special benefits and opportunities, including challenging tasks, feedback, and training (Wayne, Shore, & Liden, 1997). In exchange, trusted employees feel obligated to reciprocate by

performing activities above and beyond written in-role job descriptions (Settoon et al., 1996). Further investigation is needed in order to understand the role trust may play in the enhancement of RBSE.

Statement of the Problem

Organizational changes and technological advancements are driving the demand for employees to become more self-managing. Scholars and management practitioners alike are reporting the need for employees to be proactive in the workplace in order to solve work-related problems on their own. Proactive behavior is a multi-dimensional construct consisting of proactive personality, personal initiative, taking charge, and RBSE (Crant, 2000). Proactive personality and personal initiative are considered dispositional behaviors that are stable across varying situations and not likely to be influenced external factors. Thus, to determine the impact of selected variables on these dispositional behaviors may not lead to fruitful results, and therefore will not be given further consideration.

Taking charge and RBSE are considered contextual behaviors that can be influenced by external factors. However, taking charge behavior is sometimes viewed as overly aggressive and threatening to peers and supervisors. This negative connotation may be a barrier to useful results. Therefore, further study of the taking charge construct will not be pursued.

RBSE is the construct of interest for investigation because it can be influenced by external factors, without having an apparent "downside." Parker (1998) determined that although RBSE can be enhanced, the influence of various organizational practices is not equally important. She found that job enrichment and quality of communication were two factors that enhanced employees' willingness to accept work assignments beyond their prescribed roles. She also found that training did not promote RBSE, a contradiction from other studies (e.g., Gist, 1989; Gist, Schwoerer, & Rosen, 1989) in which self-efficacy and training were significantly related. Parker (1998) also found several contradictions related to gender. However, her studies occurred in male-dominated work environments. Research of RBSE in occupations other than male-dominated occupations may help to clarify this relationship.

Given that RBSE can be enhanced by organizational interventions and that not all interventions are equal or that results from some interventions stand in contrast to previous research (i.e., Parker, 1998), additional research related to enhancement of RBSE is needed.

Fairness and trust are cornerstones of strong work relationships; therefore, organizational justice and trust are two constructs that may enhance the development of RBSE. Employees are highly interested in the manner in which they are treated by their supervisors and organizations. It is logical that employees who operate in an environment of fair treatment and trust will sometimes be afforded opportunities to perform challenging tasks. Whether these employees accept or decline the challenge may depend on the level of their RBSE. In light of this discussion, an important question to ask is, "To what extent would organizational justice and trust impact on RBSE?"

Understanding conditions that foster RBSE in the workplace will help organizations in their quest to stimulate and encourage its development. Individuals will benefit by understanding how utilization of RBSE skills will enable them to "take control" of their work and initiate "action" toward desired results. Performance practitioners (i.e., trainers, adult educators, performance technologists, and instructional designers) will be better able to design and facilitate interventions, which will lead to successful development of RBSE.

Purpose of the Study

I examined the relationship among organizational justice, trust, and RBSE. Based upon the theoretical literature and my own experience, I developed an *a priori* path model that represents causal relationships of the variables of interest in this study. Variables are located in rectangular boxes, and straight lines with arrows are used to depict the direction of the relationship. There are two separate paths in this model. The first path (Figure 1.1) illustrates the hypothesized relationships of procedural justice, trust in organization, and RBSE.

Figure 1.1. Hypothesized relationship among procedural justice, trust in organization, and RBSE.

Procedural justice in Figure 1.1 is hypothesized to have a direct effect on trust in organization (by the direction of the arrow). This direct effect of procedural justice on trust in

organization is in concert with the results of research by Malatesta and Byrne (1997) and Masterson and Taylor (1996) in which they found procedural justice to be directed toward the organization.

H₁: Procedural justice has a direct effect on trust in organization.

Trust in organization is hypothesized to have a direct effect on RBSE. As stated above, one manner in which social exchange relationships have been conceptualized is an exchange relationship between employees and the organization (Wayne, Shore, & Liden, 1997). Employees feel an obligation to reciprocate when they believe the organization trusts them and values their effort (Settoon et al., 1996).

H₂: Trust in organization has a direct effect on RBSE.

Procedural justice is also hypothesized to have an indirect effect on RBSE through trust in organization. Trust in organization acts as a mediating variable between procedural justice and RBSE. Masterson et al. (2000) found that the relationship between justice perceptions and employee reactions occurred through mediating variables. Thus, a mediating relationship as suggested by hypothesis 2 is plausible and should be explored.

H₃: Procedural justice has an indirect effect on RBSE through trust in organization. Procedural justice affects trust in organization, and trust in organization in turn affects RBSE.

The second path (Figure 1.2) illustrates the hypothesized relationships of interactional justice, trust in supervisor, and RBSE:

| Interactional Justice | → | Trust in Supervisor | → | RBSE |

Figure 1.2. Hypothesized relationship among interactional justice, trust in supervisor, and RBSE.

H₄: Interactional justice has a direct effect on trust in supervisor.

H₅: Trust in supervisor has a direct effect on RBSE.

H₆: Interactional justice has an indirect effect on RBSE through trust in supervisor. Interactional justice affects trust in supervisor, and trust in supervisor in turn affects RBSE.

This hypothesized relationship is based on the following empirical research: a) Malatesta and Byrne (1997) found that employees' interactional justice perceptions were related to behaviors directed at the supervisor (Malatesta & Byrne, 1997); b) managers report higher quality relationships with employees they trust, compared with employees they do not trust (Dansereau, Graen, & Haga, 1975); c) mediating variables affecting the relationship between justice perceptions and employee reactions (Masterson et al. 2000); and, d) trusted employees are offered more opportunities and feel obligated to reciprocate by performing activities above and beyond written in-role job descriptions (Settoon et al., 1996).

I don't believe there is a crossover between the first path and the second path because "procedural justice and interactional justice affect behavior variables differently" (Bies, 2001, p. 99). Also, other studies found differing antecedents and consequences of procedural justice and interactional justice (Cropanzano & Prehar, 1999; Moye, Bartol, & Masterson 1997; Schminke, Ambrose, & Cropanzano 2000).

Figure 1.3 shows the complete hypothesized model. Two-headed arrows indicate a hypothesized relationship, but this relationship is not explained in the structure of the model. Additional information concerning path analysis is available in Chapter III.

Figure 1.3. Hypothesized path model of the relationship among organizational justice, trust and RBSE.

Scope and Delimitations

This research was designed to identify relationships among the variables of interest—distributive justice, procedural justice, interactional justice, organizational trust, trust in supervisor, and RBSE. Proactive behavior falls under a larger umbrella of human development. While the relationship between proactive behavior and human development is acknowledged, the investigation of this relationship is outside the scope of this study.

Definition of Terms

Role Breadth Self-Efficacy – the extent to which people feel confident they are able to carry out a broader role, beyond traditional prescribed technical requirements (Parker, 1998, p. 835).

Fairness – treating all employees alike. Fairness is also described as a relationship (not just a single transaction) consisting of fair treatment—fair outcomes, procedures, and process (Lind, 2001).

Organizational Justice – describes the role of fairness as it directly relates to the workplace (Moorman, 1991, p. 845).

Distributive Justice – describes the fairness of the outcomes an employee receives, such as pay, promotions, etc. (Moorman, 1991, p. 845).

Procedural Justice – describes the fairness of the procedures used to determine pay, promotions, etc. (Moorman, 1991, p. 845).

Interactional Justice – describes the fairness in the manner in which the procedures are carried out (Moorman, 1991, p. 852).

Trust – trust in another party reflects an expectation or belief that the other party will act benevolently. Trust involves a willingness to be vulnerable and risk that the other party may not fulfill that expectation. Trust also involves some level of dependence on the other party so that the outcomes of one individual are influenced by the actions of the other (Whitener et al., 1998, p. 513).

Organization of this Manuscript

This manuscript is composed of five chapters:

- Chapter I provides an introduction to the study including the background and statement of the problem, purpose of the study, hypotheses, definition of terms, and significance of the study.

- Chapter II consists of a review of the related research of organizational justice, interpersonal trust, and RBSE.

- Chapter III provides the design of the study including information about the subjects, instrumentation, data collection procedures, and methods of analysis.

- Chapter IV provides the findings of the study.

- Chapter V consists of a summary of the study, implications of the findings, recommendations for use of the findings, and suggestions for future research.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

In this chapter, I review the pertinent literature relative to proactive behavior, trust, and justice. My investigation of the literature reveals that technological advancement is driving rapid changes in organizations in a profound way. Employees are now expected to navigate through a maze of changes, often on their own. Skill-level requirements are increasing so fast that a yeoman's effort is often necessary just to keep pace. Individuals who exhibit proactive behavior have a definite edge in this environment. For those who are reluctant, for whatever reason, to actively engage themselves in their own skill development, the course is long and difficult. For some, developing role breadth self-efficacy (RBSE) may offer an opportunity to remain competitive and avoid skill obsolescence.

Proactive Behavior

Crant (2000) synthesizes proactive behavior literature that has received substantial scholarly research over the past fifteen years. His is the first effort to summarize the broad theoretical and conceptual research related to proactive behavior. He defines proactive behavior as "taking initiative in improving current circumstances or creating new ones; it involves challenging the status quo rather than passively adapting to present conditions" (Crant, 2000, p. 436).

Research on proactive behavior has yielded several common underlying themes: a) an action orientation as opposed to a passive, reactive orientation; b) people can take control and alter the situations in which they find themselves; and c) people consider the costs and benefits of proactive behavior and the consequences of acting proactively. Issues of contention regarding proactive behavior concern activities in which individuals behave proactively, without seeking environmental change, e.g., feedback seeking (Crant, 2000).

Crant's (2000) model (Figure 2.1) depicts antecedents and consequences of proactive behavior. The model also identifies the type of variables that have been studied in previous research (Crant, 2000).

Individual Differences		

Individual Differences

Proactive Behavior
Constructs
- Proactive personality
- Personal initiative
- Role breadth self-efficacy
- Taking charge

Other Individual
Differences, e.g.,
- Job involvement
- Goal orientation
- Desire for feedback
- Need for achievement

Proactive Behaviors

General Actions, e.g.,
- Identifying opportunities to improve things
- Challenging the status quo
- Creating favorable conditions

**Context Specific
Behaviors**
- Socialization
- Feedback seeking
- Issue selling
- Innovation
- Career management
- Stress coping

Outcomes, e.g.,
- Job performance
- Career success
- Job attitudes
- Feelings of personal control
- Role clarity

Contextual Factors,
e.g.,
- Organizational culture
- Organizational norms
- Situational cues
- Management support
- Public or private setting

Figure 2.1. An integrative model of antecedents and consequences of proactive behavior.

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[1] "Reprinted from Journal of Management, 26, J.M. Crant, 'Proactive Behavior in Organizations,' p. 438, 2000, with permission from Elsevier Science."

Antecedents include individual differences and contextual factors. "One set of individual differences is designed to capture one's disposition toward or potential to perform proactive behaviors, such as proactive personality, and role breadth self-efficacy. The other set of individual differences consists of variables associated with specific proactive behaviors such as desire for feedback and job involvement. Contextual factors are listed as antecedents because they are associated with the decision to behave in a proactive fashion" (Crant, 2000, p. 437). General and context specific proactive behaviors are depicted in the central portion of the model. General proactive behaviors may occur in a number of work-related situations, while the context

specific proactive behaviors are more limited in their occurrence. Outcomes of proactive behavior are depicted on the right portion of the model (Crant, 2000).

Proactive Behavior Constructs

Crant (2000) identifies four constructs that illustrate one's propensity to engage in proactive behavior—proactive personality, personal initiative, taking charge, and role breadth self-efficacy. Proactive personality and personal initiative describe dispositional tendencies while taking charge and role breadth self-efficacy are contextually related (Crant, 2000). A brief description of each follows.

Proactive Personality

Bateman and Crant (1993) describe proactive personality as a disposition of behavior in which individuals take action to influence their environments. "Proactive people identify opportunities and act on them, show initiative, take action, and persevere until meaningful change occurs. Less proactive individuals are passive and reactive, preferring to adapt to circumstances rather than change them" (Bateman & Crant, 1993, p. 105).

Bateman and Crant (1993) designed the Proactive Personality Scale (PPS) to measure this construct. Statistical analyses suggest that proactive personality is unidimensional. Proactive personality research has been conducted on a variety of organizational behaviors and outcomes including individual job performance (Crant, 1995), career outcomes (Seibert, Crant & Kraimer, 1999), and entrepreneurship (Crant, 1996). Study results suggest that proactive personality is related to numerous desirable behaviors. Crant (2000) notes that "longer-term evidence is needed to establish the stability of the PPS" (Crant, 2000, p. 441).

Personal Initiative

"Personal initiative is a behavior syndrome resulting in an individual's taking an active and self starting approach to work and going beyond what is formally required in a given job. More specifically, personal initiative is characterized by the following aspects: it a) is consistent with the organization's mission, b) has a long-term focus, c) is goal-directed and action oriented, d) is persistent in the face of barriers and setbacks, and e) is self-starting and proactive" (Freese, Kring, Soose, and Zempel, 1996, p. 38).

Freese et al. (1996) use action theory to describe personal initiative in which goals guide actions. An employee develops his or her goals from work tasks. While goals have different time frames for accomplishment, a long-term focus is an essential element of personal initiative. Long-term goals must be translated into action in order to have impact (Freese et al., 1996). According to Kuhl (1992), some people exhibit "state orientation" in which they have a goal but do little to achieve it, while others have an "action orientation" in which they quickly put goals into action. Thus personal initiative implies goal-directness and action orientation (Freese et al., 1996).

Personal initiative is related to entrepreneurship and intrapreneurship. Entrepreneurship generally refers to individuals who establish a business of their own. Entrepreneurial behavior includes "demonstrating initiative and creative thinking, organizing social and economic mechanisms to turn resources and situations to practical account, and accepting risk and failure" (Hisrich, 1990, p. 209). Intrapreneurs operate within a corporation and possess the same entrepreneurial spirit as entrepreneurs (Hisrich, 1990).

Personal initiative is particularly important in organizing work and improving process and product quality in organizations where supervision is minimal (Freese et al., 1996). Personal initiative is also needed in situations in when something goes wrong or is unexpected. Employees are expected to use personal initiative in dealing with unpredictable events (Freese et al., 1996).

RBSE

RBSE is the proactive behavior construct of interest in this study. Parker (1998) recently introduced RBSE, a construct defined as "the extent to which people feel confident that they are able to carry out a broader and more proactive role, beyond traditional prescribed technical requirements" (Parker, 1998, p. 835). Key components of RBSE include employee proactivity on the job, interpersonal skills, and integrative skills. Interpersonal and integrative skills are part of RBSE because employees are frequently required to communicate and integrate activities across departments. Interpersonal and integrative skills include problem solving, customer service, goal setting, conflict resolution, and making presentations (Parker 1998). The focus of RBSE is on what people *feel* they can do rather than on what they *do* (Parker 1998).

RBSE differs from other constructs such as organizational citizenship behavior (OCB) and self-esteem. RBSE explicitly focuses on activities that require employees to be proactive, whereas OCB includes some dimensions that are proactive and some that are passive. Compared with self-esteem, RBSE changes over time while self-esteem is seen as a stable trait (Brockner, 1988; Wood & Bandura, 1989; as cited in Parker, 1998). RBSE is expected to change in response to the environment and organizational experiences (Parker, 1998).

Parker (1998) investigated the impact of organizational interventions on the development of RBSE. She found that the quality of workplace communication promotes RBSE. "The more people feel that they are informed, listened to, and encouraged to speak, then the more likely they will develop confidence in carrying out a range of proactive, interpersonal, and integrative tasks" (Parker, 1998, p. 849).

She also found that work redesign practices influence the development of RBSE, particularly job enrichment that emphasizes task autonomy and control of the work environment (Parker, 1998). Autonomy and perceived control over the environment are recognized as critical determinants of self-efficacy (Bandura, 1997). Contrary to other studies (e.g., Gist, 1989), Parker found no support that training influences RBSE (Parker, 1998).

Organizational interventions require the proper environment to achieve success in promoting the development of RBSE. In organizations where employee training and participation in decision-making activities are limited, development of RBSE will suffer (Parker, 1998). "Such an environment can cause a vicious cycle where, even if opportunities for enactive mastery arise, employees lack the confidence to participate" (Parker, 1998, p. 837). Gist (1987) adds, "in some circumstances, possibly because of fear or incapacity, individuals may not expose themselves to opportunities for enactive mastery" (Gist, 1987, p. 473).

Taking Charge

"Taking charge entails voluntary and constructive efforts, by individual employees, to effect organizationally functional change with respect to how work is executed within the contexts of their jobs, work units, or organizations. It is similar to other forms of extrarole behavior in that it is discretionary (that is, not formally required). Taking charge is inherently change-oriented and aimed at improvement" (Morrison & Phelps, 1999, p. 403).

Morrison and Phelps (1999) compare taking charge to other change-oriented behaviors such as principled organizational dissent and whistleblowing. However, taking charge differs from these two behaviors in that taking charge is organizationally sanctioned and directed towards positive ends. Taking charge also shares features with issue selling, task revision, and role innovation. Issue selling focuses on strategic issues (Dutton & Ashford, 1993), whereas taking charge focuses on ways to accomplish organizational goals. Task revision and role innovation refer to changes and improvements within a job role while taking charge can extend beyond the organizational prescribed role (Morrison & Phelps, 1999).

Personal initiative also shares features with taking charge. Personal initiative refers to "a behavioral syndrome resulting in an individual's taking an active and self-starting approach to work and going beyond what is formally required in a given job" (Frese et al., 1996: 38). One major difference between these two proactive constructs is that personal initiative is considered a stable disposition, while taking charge varies depending upon the situation (Morrison & Phelps, 1999).

Employees decide whether or not to take charge based on the possibility of success and the likelihood of consequences. Employees are more likely to take charge if: a) they believe top management is open to employee-initiated change; b) they have a high level of self-efficacy; and c) they have an internalized sense of responsibility for bringing about change in their workplace. "Even within the same organization, some individuals may be more likely to take charge than others-specifically, those with high self-efficacy and felt responsibility" (Morrison & Phelps, 1999, p. 414).

Taking charge behavior may be seen as a form of leadership when individuals initiate action and influence positive outcomes. It may also be viewed as threatening when it deviates from prescribed roles and becomes overly aggressive (Morrison & Phelps, 1999).

Context-Specific Proactive Behaviors

In addition to the four general proactive behavior constructs described above, Crant (2000) identifies six other proactive behaviors that occur in specific contexts—socialization, proactive feedback seeking, issue selling, innovation, career management, and coping with stress (Crant, 2000).

Socialization

Socialization is the process newcomers use to learn the beliefs, values, orientations, behaviors, and skills necessary to fulfill their new roles within an organization (Van Maanen, 1976; as cited in Ashforth & Saks, 1996). Van Maanen and Schein (1979) proposed six tactics that organizations can use to structure the socialization experiences of newcomers. Collective socialization refers to newcomers undergoing a common set of experiences rather than individually unique experiences. Formal socialization segregates newcomers from regular organization members during a defined socialization period. Sequential socialization refers to a fixed sequence of steps leading to the new job role. Fixed socialization provides a specific timetable for new role assumption. In a serial socialization process, experienced employees assist newcomers in assuming their new work role. Investiture affirms the incoming identity and personal characteristics of the newcomer (Van Maanen & Schein, 1979).

Newcomers are not always passive upon organizational entry (Crant, 2000). Ashford and Black (1996) indicate that individuals are likely to differ in their motivation to actively engage their new environments. They found that newcomers actively engage in proactive behaviors such as feedback seeking, building social networks and negotiating job changes. A desire for control is one reason for this type of proactive behavior, particularly during the early phase following organizational entry. Another reason is an effort to reduce ambiguity and uncertainty that is common in a new work role (Ashford & Black, 1996).

Proactive Feedback Seeking

Ashford and Cummings (1983) describe two distinct strategies of feedback seeking behavior (FSB) to access information in the environment—*monitoring* and *inquiry*. Monitoring involves observing events, situational cues, and the behavior of others. Inquiry involves the direct asking of others for feedback.

Motives that drive FSB include a desire to reduce uncertainty and ambiguity, acquire new skills, evaluate present abilities, protect one's ego or maintain a certain level of self-esteem, and correct errors in goal-directed behavior (Ashford & Cummings, 1983).

FBS is not without costs—there are three primary costs involved in active FSB: (1) effort costs—the level of effort required to obtain feedback information; (2) face loss costs—the risks involved in obtaining feedback information; and (3) inference costs—the amount and type of

inference required in obtaining feedback information (Ashford & Cummings, 1983). The inquiry strategy for FSB carries more effort costs than monitoring because the behavior required involves physically locating and asking others as opposed to silently observing behavior in the environment. Inquiry also invites the potential for face loss because this type of FSB is overt and public whereas monitoring is kept to one's self. Inference costs are high for both strategies due to the guesswork involved in the FSB.

The source of feedback is an important consideration in feedback seeking. One important source attribute that is likely to affect the decision to ask for feedback is expertise. Feedback seekers are motivated, at least in part, to obtain accurate and reliable information and sources with high expertise are best able to provide such information. Another source attribute is accessibility, which refers to the ease with which one can obtain information from a given source (O'Reilly, 1982). The more accessible a given source, the less time and effort are involved in acquiring feedback from that source. Therefore, a greater likelihood exists that individuals will seek feedback from sources that are accessible. A third source attribute that will affect feedback inquiry is the quality of the relationship between the seeker and the source. The better the relationship, the less likely the source will react negatively to the feedback request.

Issue Selling

Issue selling refers to a proactive approach in bringing relevant issues to the attention of upper management. Issue selling occurs in the early stages of an organization's decision-making process in order to identify opportunities and problems and to influence the organization's course of action. Propensity to engage in proactive issue selling is guided by risk. An individual's reputation and credibility can be enhanced through issue selling when the organization deems his or her information in a positive manner. Likewise, reputation and credibility can be tarnished when information shared through issues selling is viewed as negative. Individuals with functional expertise are more likely to engage in issue selling than those without because they believe they are credible in the eyes of management (Dutton & Ashford, 1993).

Innovation

Kanter (1983) describes innovation as the generation and implementation of new ideas, processes, products, or services. Innovation may involve creative use as well as original invention. Ability to change or adapt is of paramount importance (Kanter, 1983).

Innovation also encompasses the adaptation of products or processes from outside an organization. It is a multistage process consisting of different activities with individuals involved in any combination of these behaviors at any one time. Additionally, innovative behavior is related to the quality of the supervisor-subordinate relationship (Scott & Bruce, 1994).

Kleysen and Street (2001) identified five categories of behaviors associated with individual innovation: opportunity exploration, generativity, formative investigation, championing, and application from a review of the creativity and innovation literatures. Opportunity exploration consists of a) paying attention to opportunity sources; b) looking for opportunities to innovate; c) recognizing opportunities; and d) gathering information about opportunities. Generativity refers to a) generating ideas and solutions to opportunities; b) generating representations and categories of opportunities; and c) generating associations and combinations of ideas and information. Formative investigation involves a) formulating ideas and solutions; b) experimenting with ideas and solutions; and c) Evaluating ideas and solutions. Championing is a) mobilizing resources; b) persuading and influencing; c) pushing and negotiating; and d) challenging and risk-taking. Application refers to a) implementing; b) modifying; and c) routinizing (Kleysen & Street, 2001).

Career Management

Fryer and Payne (1984) indicate that proactive career behavior occurs when people choose to initiate, intervene in, or perceive of a career situation in which the person acts in values directions rather than responds passively to imposed change (as cited in Crant, 2000, p. 451). Bell and Staw (1989) view people as proactive sculptors of their work environment rather than as sculptures of the organization. They argue that work roles can be individualized, with individuals possessing power to change their work situations through personal control. "People may shape their environments as much or more than they are shaped by their environments" (Bell & Staw, 1989, p. 247).

Claes and Ruiz-Quintanilla (1998) identify four proactive career behaviors: a) proactive career planning that includes setting goals, exploring options and formulating plans; b) proactive skill development that consists of efforts to master various tasks in one's occupation; c) proactive consultation behavior that includes efforts to build relationships with supervisors and colleagues in order to acquire career-related information; and d) proactive

networking behavior that consists of building interpersonal networks that can be tapped for information, advice, and assistance (Claes & Ruiz-Quintanilla, 1998).

Coping With Stress

"Proactive coping consists of efforts undertaken in advance of a potentially stressful event to prevent it or to modify its form before it occurs" (Aspinwall & Taylor, 1997, p. 417). There are five stages in proactive coping: (a) resource accumulation – time, money, social support, and organizational skills; (b) ability to recognize that a potentially stressful event is likely to happen; (c) initial appraisal – assessment of current and potential stressor; (d) preliminary coping efforts – activities to prevent or minimize the stressor; and (e) elicitation and use of feedback – acquisition and use of feedback concerning the development of the stressful event (Aspinwall & Taylor, 1997).

Other Proactive Behaviors

Crant (2000) indicates that several additional proactive variables—behavioral self-management/self-regulation, impression management, goal setting, and self-efficacy— should be included in a theoretical framework of proactive behavior (Crant, 2000). Even though these variables are not included in his model, each is discussed below.

Self-Management

Self-management is described in behavioral research under various names including self-regulation (Bagozzi, 1992; Bandura, 1997; Locke & Latham, 1994), behavioral self-management (Luthans & Davis, 1979), individual self-management, (Uhl-Bien & Graen, 1998), self-leadership (Manz, 1983), and self-direction (Knowles, 1975). The common thread among each of these terms relates to behavior in which individuals set goals, seek feedback, self-monitor, and self-evaluate. Self-management consists of proactive behavior as opposed to passive reaction.

"Self-regulation refers to people doing more than simply reacting to external influences in that they select, organize, and transform the stimuli that impinge upon them" (Bandura, 1977, 1986; as cited in Locke & Latham, 1994). Through self-set goals and self-administered incentives, people learn how to exert control over their own actions (Locke & Latham, 1994, p. 22). Research literature focusing on social cognition, self-efficacy, and goal setting offer a similar conception of proactive behavior in the workplace.

Impression Management

Impression management refers to upward influence behaviors that are used by employees to impact their work environment. These behaviors are directed toward superiors in the organization (Wayne, Shore, & Liden, 1997). It is well established in the feedback literature that people need feedback in order to accurately assess their work, to regulate their behavior, and ultimately, to succeed (Ashford, 1989; Ilgen, Fisher, & Taylor, 1979). Impression management is designed to create a favorable impression when one is using the inquiry approach to feedback seeking behavior (Ashford & Cummings, 1983). Impression management adds to the complexity of the feedback seeking process because feedback seekers may be trying to create a favorable impression rather than gather useful information (Morrison & Bies, 1991).

While impression management suggests a negative connotation, under some conditions it can be viewed quite positively. Impression management in the feedback-seeking process may actually improve the accuracy and fairness of performance appraisals. Evaluators often have limited access to subordinates' day-to-day activities, resulting in limited information upon which to base evaluations (Borman, 1978). Kipnis and Schmidt (1988) indicate that subordinates use upward influence tactics to receive positive performance ratings, promotions, or salary increases.

Social Cognition and Self-Efficacy

Social cognitive theory is the predominant theory of self-regulation in psychology (Locke & Latham, 1994). In social cognitive theory, behavior, environment, and personal events form a triadic reciprocal causation relationship to explain human agency (Bandura, 1997). Self-efficacy is one component of social cognitive theory. Self-efficacy beliefs are very important to action. If people believe they have the capability to produce results, they will initiate action toward that end. If they believe they cannot produce results, they will not put forward the effort. Self-efficacy also influences how long individuals will persevere when faced with obstacles and failure (Bandura, 1997).

Self-efficacy beliefs emanate from four principal sources—enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states (Bandura, 1997). Physiological and affective states are not related to this study, and therefore will not be discussed. Enactive mastery experiences are facilitated through gradual accomplishments and are the most influential source of efficacy information. Vicarious experiences (modeling) entail a

comparison against others or group norms. People often compare themselves to those they work with or compete against. Efficacy beliefs are raised or lower depending on the comparison. Personal efficacy has very little influence when a comparison is made with someone very different from them (Bandura, 1997). Verbal persuasion can strengthen efficacy beliefs for those who may have self-doubt about their abilities. "Where requisite skills are lacking, however, social persuasion alone cannot substitute for skill development. Simply telling people they are much more capable than they believe themselves to be will not necessarily make it so" (Bandura, 1997, p. 105).

Goal Setting

Locke and Latham's (1994) goal setting theory is based on purposefully directed action and explains that some people perform better on work tasks than others because they have different performance goals. The goal identifies what object or outcome one should aim for and is the standard by which one evaluates one's performance; feedback provides information as to the degree to which the standard is being met. Goals and feedback together are more effective in motivating high performance or performance improvement than either is alone (Locke & Latham, 1990).

There are three direct mechanisms by which goals regulate performance: a) goals *direct* activity toward actions that are relevant to it at the expense of actions that are not relevant; b) goals regulate *effort* expenditure in relation to the difficulty of the goal; c) goals affect the *persistence* of action in situations where there are no time limits (Locke & Latham, 1990).

Trust

Trust research has yielded information concerning its relationship with various work outcomes including performance (Early, 1986), citizenship behavior (Deluga, 1994; McAllister, 1995), communication (Butler & Cantrell, 1994; O'Reilly & Anderson, 1980; Penley & Hawkins, 1985), empowerment (Gomez & Rosen, 2001), leader behavior (Podsakoff, MacKenzie, Moorman, & Fetter, 1990), commitment and innovation (Ruppel & Harrington, 2000), and psychological climate (Strutton, Toma, & Pelton, 1993).

Additionally, research has focused on various dimensions of trust including initial trust formation (Zand, 1972, 1996), the relationship between a trustor and a trustee (Mayer, Davis, & Schoorman, 1995), and managerial trustworthiness (Whitener, Brodt, Korsgaard, & Werner,

1998). This group of researchers offers models of trust that are frequently cited in the management literature and capture the essence of trust as it relates to this study.

Zand's Spiral Model of Trust

Zand (1972; 1996) proposes that trust between two individuals develops through a circular, mutually reinforcing process (Figure 2.2) that begins with one's expectations about another's behavior. He describes how trust spirals up or down depending on how people disclose information, share influence, and exercise control. When people trust one another, they provide comprehensive and accurate information without fear that exposure will lead to abuse. They are open to influence from those they trust and are confident that control is not necessary because the other person will fulfill their obligations (Zand, 1992; 1996).

Mistrust, on the other hand, occurs when people conceal or distort relevant information out of fear of exposure and vulnerability. Suspicion of malevolent behavior leads to a deflection of others' attempts to exert influence. One who does not trust makes every effort to decrease their dependence on others and seeks to impose controls on others' behavior (Zand, 1992; 1996).

People have predisposing beliefs about how trusting they should be and how trustworthy other people are. Predisposing beliefs lead one to regulate how much information to reveal, how receptive to be toward others, and how much control to exercise. They gather impressions of others' trustworthiness through repeated interactions. Short-cycle feedback of these impressions confirms or disconfirms one's predisposing beliefs. Equilibrium occurs after short-cycle feedback becomes repetitive and trust reaches a plateau (Zand, 1992;1996). "When people trust each other, the three phases flow in a beneficial spiral… When they start with a lack of trust, people can get caught up in a downward spiral…until they reach a plateau of mistrust" (Zand, 1996, pp. 94-95).

Figure 2.2. A spiral model of trust.

Mayer, Davis, and Schoorman's Proposed Model of Trust

Mayer, Davis, and Schoorman (1995) describe a relationship between a trustor and a trustee (Figure 2.3) in an organization setting in an effort to illuminate why one individual would trust another. They propose that the level of trust and the level of perceived risk in a particular situation will lead to risk taking in the relationship.

In this model, trust is unidirectional. Mutual trust between a trustor and a trustee is not considered. A trustor's propensity to trust and his or her perception of the trustworthiness of another person are key factors in determining the extent of trust. It is important to understand that a distinction exists between a trustor's propensity to trust and trustworthiness on the part of a trustee (Mayer et al. 1995).

Propensity to trust is a trait that indicates "the general willingness to trust others" (Mayer et al. 1995, p. 715). People vary in their propensity to trust. However, it is a stable trait that one

carries from one situation to another. Propensity influences how much trust one will have in another, prior to having any knowledge about that particular individual (Mayer et al. 1995).

Figure 2.3. Proposed model of trust.

Trustworthiness consists of ability, benevolence, and integrity. Ability refers to an individual's highly developed skills and competencies in a specific domain that bring trust on tasks related to that domain. Benevolence refers to the relationship between the trustee and the trustor (e.g., mentor and protégé) in which the mentor helps the protégé without expectation of a reward. Integrity refers to "the consistency of the party's past actions, credible communications about the trustee from other parties, belief that the trustee has a strong sense of justice, and the extent to which the party's actions are congruent with his or her words" (Mayer et al. 1995, p. 719).

Risk is an important element involved in a trusting relationship. Risk taking in relationship is an outcome of trust. Risk taking in relationship is different than general risk taking behavior because it can occur only in the context of a specific, identifiable relationship with another party" (Mayer et al., 1995, p. 725).

The amount of perceived risk determines if the trustor will engage in a risk taking relationship. Perceived risk involves an assessment of positive and negative outcomes associated with risk taking behavior. If the level of trust is higher than the perceived risk, the trustor will engage in the relationship (Mayer et al., 1995).

There is a feedback loop in the model *from outcomes* of risk taking in relationship to factors of perceived *trustworthiness*. A positive outcome enhances the trustor's perception of the trustee and positively influences future interactions. An unfavorable outcome leads to a decline in trust, and subsequent interactions are viewed accordingly (Mayer et al., 1995).

Whitener, Brodt, Korsgaard, and Werner's Exchange Framework of Initiating Managerial Trustworthy Behavior

Whitener et al., (1998) present a model of trust (Figure 2.4) in which managerial actions form the basis of trust. They label these actions as managerial trustworthy behavior and argue that managers are responsible for initiating trusting relationships. The model incorporates concepts from social exchange theory and agency theory (Whitener et al., 1998). Social exchange theory describes social exchanges as interactions between two individuals in which one party does another a favor with the expectation of a favor in return, although no time period for this reciprocation is specified. Social exchange involves trusting that the other party will fulfill their obligations (Blau, 1964).

Agency theory describes an economic relationship between a principal and an agent. In this model, managers are the principals and employees are the agents. Managers delegate tasks to the agents in exchange for compensation. Agency theory implies a degree of managerial monitoring and control of employee behavior (Whitener et al., 1998).

Managerial trustworthy behavior (Figure 2.4) consists of five dimensions: a) behavioral consistency; b) behavioral integrity; c) sharing and delegation of control; d) communication; and e) demonstration of concern.

Behavioral consistency reflects the reliability or predictability of managers' actions, based on their past actions. Behavioral integrity refers to the consistency between what the manager says and what he or she does. Sharing and delegation of control indicates the extent to which managers involve employees. Accurate information, explanations for decisions, and openness are three communication factors that affect whether employees consider managers trustworthy.

Demonstrating concern for employees through consideration of their needs and interests also indicates managerial trustworthy behavior (Whitener et al., 1998).

Three sets of variables—organizational variables, relational variables, and individual variables—act as antecedents to support and encourage managerial trustworthy behavior. Organizational structure can be found in several forms, i.e., hierarchical, flat, entrepreneurial, etc., in which the degree of managerial control of employee actions may be dictated by the "system." Organizational policies regarding employee rewards and promotions are also system-related and may support or inhibit managerial trustworthiness. The culture of an organization provides information on how employees are treated in the system and therefore, may also contribute or inhibit managerial trustworthiness. For example, some organizations reward risk-taking behavior while others do not (Whitener et al., 1998).

Relational variables describe behavior associated with an exchange relationship between a manager and subordinate. High quality exchange relationships are characterized by mutual trust (Dansereau, Graen, & Haga, 1975; Dienesch & Liden, 1986). Initial interactions between managers and subordinates that are favorable set the tone for future interactions and provide the impetus for a trusting relationship. Managers are more likely to initiate exchanges with employees whom they expect are willing to reciprocate. Managers weigh the cost of initiating an exchange in order to determine if an employee will or will not reciprocate. Managers are more likely to engage in trustworthy behavior if the employee is likely to reciprocate (Whitener et al., 1998).

Three individual variables—propensity to trust, self-efficacy, and values—influence managerial trustworthy behavior. A manager with a propensity to trust is likely to initiate trustworthy behavior. Likewise, a manager who believes he or she has the ability to engage in trustworthy behavior will actually engage in trustworthy behavior. Finally, managers with a value system that reflects a genuine interest and concern for employees rather than self-advancement are more likely to engage in trustworthy behavior (Whitener et al., 1998).

Boundary conditions—perceived similarity, competence, propensity to trust, and task interdependence—may affect the extent of employees' perceptions of managerial trustworthy behavior. Perceived similarity concerns the development of trust between a manager and an employee who perceive that they have similar characteristics. Competence concerns employees'

perceptions that one's manager has the ability to handle management responsibilities. If a manager is found lacking in this capacity, an employee is unlikely to develop trust in that manager. If employees have a propensity to trust, then they will trust a manager who engages in trustworthy behavior. If employees do not have a propensity to trust, then they will not develop trust in their managers, even though their managers engage in trustworthy behavior. Finally, task interdependence requires cooperation which implies a need for a degree of trust among parties involved in completion of the task. Managers may be willing to initiate trust due to this requirement of cooperation (Whitener et al., 1998).

Figure 2.4. Exchange framework of initiating managerial trustworthy behavior.

[4] From "Managers as Initiators of Trust: An Exchange Relationship Framework for Understanding Managerial Trustworthy Behavior," by E. M. Whitener, S. E. Brodt, M. A. Korsgaard, and J. M. Werner, 1998, Academy of Management Review, 23, p. 519. Copyright 1998 by Academy of Management. Reprinted with permission.

Organizational Justice

Fairness is a core value in organizations (Konovsky, 2000). Organizational justice refers to fairness in the workplace (Greenberg, 1990), and in particular, employees' perceptions of fairness and how fair treatment influences other employee work-related variables (Moorman, 1991). "Research on organizational justice has been guided by the notion that employees who believe they are treated fairly will be favorably disposed toward the organization and engage in prosocial behavior on behalf of the organization" (Barling & Phillips, 1993, p. 649).

Brockner and Siegel (1996) describe three major waves of justice research over the past three decades. The initial wave focused on distributive justice, in which the concerns were related to the fairness of outcomes of resource allocation such as pay and promotions. Procedural justice was the thrust of the research during the second wave. Procedural justice concerns the fairness of the process in distribution of outcomes and the interpersonal behavior accorded to the recipients by those who implemented distribution decisions (Brockner & Siegel, 1996).

Thibaut and Walker (1975) describe process control as input or voice by recipients into the process and decision control as input regarding how the decision is carried out. "The second wave of research sought to disentangle the effects of procedural and distributive justice. Recent research has shown that distributive justice is more important than procedural justice in influencing people's satisfaction with the result of the decision, whereas procedural justice is more important than distributive justice in determining their evaluations of the parties or the institution that enacted the decision (Brockner & Siegel, 1996, p. 391). The third and current wave evaluates the joint interactive effects of distributive and procedural justice on people's reactions to a decision (Brockner & Siegel, 1996).

<u>Distributive Justice</u>

Distributive justice is concerned with the fairness of outcomes an employee receives such as pay and promotions (Moorman, 1991). Distributive justice was the earliest of the justice dimensions appearing in the literature. Distributive justice in organizations grew out of more general social action justice based on distributive justice theory, Homans, 1961; equity theory, Adams, 1965; and relative deprivation theory, Stouffer et al., 1949 (Greenberg, 1990). Of the three theories, equity theory is the one most closely aligned with distributive justice (Byrne & Cropanzano, 2001) and, therefore, is the only theory discussed in this literature review.

Equity theory claims that individuals compare their rewards to their production, and in turn, make a comparison with coworkers. If one individual is higher in salary than another, that individual is theorized to be inequitably overpaid, and the other is theorized to be inequitably underpaid. Equal outcome is theorized to produce equality and hence job satisfaction (Greenberg, 1990). Eventually, equity theory research brought questions related to other organizational practices, particularly those related to the fairness of processes such as how pay plans were administered. The process-oriented concerns shifted the research to "perceived fairness of the policies and procedures used to make decisions (Greenberg, 1990, p. 402). This new era of organizational justice research is known as procedural justice. Although procedural research became dominant, distributive justice research continues.

Procedural Justice

Procedural justice describes the fairness of the procedures used in determining employee outcomes (Moorman, 1991). Thibaut and Walker (1975) are credited with introducing procedural justice in 1975 through their work in the legal arena with dispute resolution procedures. They suggested that dispute resolution occurs in two stages, a process stage in which information is presented and a decision stage in which a decision is rendered. Through laboratory studies, Thibaut and Walker (1975) "found that verdicts in which participants were given process control (voice) were perceived as more fair and better accepted than decisions in which the participants were denied process control" (Greenberg, 1990, p. 403).

Leventhal, Karuza, and Fry (1980) extended the procedural justice research by adding six criteria as determinants of fair procedures. An individual contrasts an existing situation to a standard or rule, comparing a distribution or procedure to that which he believes would be ideally fair in that situation. They identified six justice rules used by individuals in judging the fairness of procedures—accuracy, representativeness, bias suppression, consistency, ethicality, and correctability (Leventhal et al., 1980).

Folger and Greenberg (1985) brought procedural justice to organizational sciences in 1985 with their publication on procedural justice. Additionally, Tom Tyler, Allan Lind, Robert Bies, and Joel Brockner were also major contributors in establishing procedural justice as valuable organizational construct of fairness (Byrne & Cropanzano, 2001).

Interactional Justice

Interactional justice refers to the interpersonal treatment employees receive from decision makers and the adequacy with which the formal decision-making procedures are explained (Greenberg, 1990). Bies and Moag (1986) argue, "an allocation decision is a sequence of events in which a procedure generates a process of interaction and decision making through which an outcome is allocated to someone" (Bies & Moag, 1986, pp. 45-46). They argue that these are two separate processes, one concerning decision procedures and one concerning the enactment of the procedures and each process is subject to fairness considerations (Bies & Moag, 1986). They focused on the fairness of the communication aspect of interpersonal treatment and criteria that people use to judge the fairness of communication during the process of resources allocation. "Their criteria included truthfulness, respect, propriety of questions, and justification, which were subsequently summarized into two categories by researchers: a) clear and adequate explanations, or justifications, for an allocation decision, and b) treatment of recipients with dignity and respect during the implementation of decision procedures" (Bobocel & Holmvall, 2001, p. 89).

Some researchers view interpersonal justice and informational justice as two separate dimensions of interactional justice (Greenberg, 1990). Interpersonal justice refers to personal treatment such as politeness, dignity, and respect, while informational justice refers to the explanations provided about why certain procedures were followed (Colquitt, 2001). There is a debate among researchers on whether interactional justice is a separate construct or a component of procedural justice. This issue and others pertaining to organizational justice will now be explored.

Organizational Justice Meta-Analyses

Three separate meta-analyses concerning organizational justice studies were reported in the literature in 2001. Results from each of the studies offer a synopsis of the justice research over the past three decades. Cohen-Charash and Spector (2001) conducted a meta-analysis of 190 studies of the correlates of organizational fairness. They define organizational fairness as distributive, procedural, and interactional justice. The investigation was "guided by the topics that occupied organizational justice researchers thus far" (Cohen-Charash & Spector, p. 301, 2001). Figure 2.5 represents a summary of the variables that were included in the meta-analysis.

Justice perceptions are influenced by the outcomes one receives from the organization, organizational practices, and perceiver characteristics. In this study the organizational outcomes and practices that were examined include voice, communication with employees, organizational support, perception of outcomes as positive or negative, and satisfaction with outcomes. The demographic characteristics that were examined include age, gender, race, education, tenure, and salary. Negative affectivity and self-esteem were the personality variables that were investigated. "Negative affectivity concerns people who tend to experience negative emotional states across time and situations" (Cohen-Charash & Spector, 2001, p. 284).

Figure 2.5. Justice in organizations.

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[5] From "The Role of Justice In Organizations: A Meta-Analysis," by Y. Cohen-Charash and P. E. Spector, 2001, *Organizational Behavior and Human Decision Processes*, 86, p. 283. Reprinted with permission.

Work performance, extra-role behavior, counterproductive behavior, and attitudes and emotions are considered to be outcomes of justice perceptions. The relationship between these

outcomes and organizational justice was examined in a variety of ways. For example, extra-role behavior in the meta-analysis was based primarily on studies of organizational citizenship behavior (OCB). General OCB, OCB directed toward the organization, and OCB directed toward one's supervisor were the principal areas of investigation. Counterproductive work behavior involved studies related to destroying equipment, spreading rumors, and stealing. Attitudes toward specific outcomes, the organization, and the direct supervisor, including trust, were examined . Various aspects of job satisfaction and commitment were also among the attitudes investigated, while anger and negative mood were among the investigation of emotions (Cohen-Charash & Spector, 2001).

Results of the outcomes that influence justice perceptions found: a) organizational outcomes influence justice perceptions positively or negatively depending upon the organization's fairness in distribution (distributive justice); b) organizational practices affect justice perceptions through the fairness of procedures used by the organization (procedural justice); c) organizational practices also affect justice perceptions through the quality of treatment and explanation one receives from organizational authorities (interactional justice) (Cohen-Charash & Spector, 2001).

Additionally, perceiver characteristics were found to have little effect on justice perceptions. "Regardless of age, gender, race, education level, and tenure, people tend to perceive justice similarly" (Cohen-Charash & Spector, 2001, p. 302). Negative affectivity was negatively related to procedural and interactional justice (Cohen-Charash & Spector, 2001).

Results of outcomes that are influenced by justice perceptions include: a) work performance is related to procedural justice but not distributive justice; b) work performance shows a weak relationship with interactional justice; c) distributive, procedural, and interactional justice are all related to organizational citizenship behaviors; d) distributive and procedural justice are related to counterproductive work behavior; e) job satisfaction is related to all three justice types as is trust in management; and f) trust in supervisor is better related to procedural justice than distributive justice (Cohen-Charash & Spector, 2001). Finally, "distributive, procedural, and interactional justice are strongly related yet distinct constructs" (Cohen-Charash & Spector, 2001, p. 307).

Colquitt, Conlon, Wesson, Porter, and Ng (2001) conducted a meta-analysis of 183 studies in which they selected studies that were published beginning in 1975. Thibaut and Walker (1975) are credited with introducing procedural justice in 1975 through their work in the legal arena with dispute resolution procedures. They suggested that dispute resolution occurred in two stages, a process stage and a decision stage. "Disputants viewed the procedure as fair if they perceived that they had process control (i.e., control over the presentation of their arguments and sufficient time to present their case). This process control effect is often referred to as the 'fair process effect' or 'voice' effect (e.g., Folger, 1977; Lind & Tyler, 1988) and it is one of the most replicated findings in the justice literature" (Colquitt et al., 2001, p. 426). Leventhal, Karuza, and Fry (1980) extended the procedural justice research into organizational settings by adding six criteria as determinants of fair procedures—accuracy, representativeness, bias suppression, consistency, ethicality, and correctability (Colquitt et al., 2001).

Colquitt et al. (2001) examined organizational justice as a four-dimensional construct consisting of distributive, procedural, interpersonal, and informational justice. Some researchers view interpersonal justice and informational justice as two separate dimensions of interactional justice (Greenberg, 1990). Interpersonal justice refers to personal treatment such as politeness, dignity, and respect, while informational justice refers to the explanations provided about why certain procedures were followed (Colquitt et al., 2001).

Colquitt et al. (2001) explored three types of research questions to add further development to the organizational justice literature. The first question deals with the relationship of the justice constructs—how highly related are the various dimensions of organizational justice? Results of the meta-analyses regarding the first question indicate that process control and Leventhal criteria are highly correlated. Interpersonal justice and informational justice are highly correlated, but not enough to combine under an interactional justice umbrella. Additionally, procedural, interpersonal, and informational justice are distinct constructs with different correlates. Separate measurement of each dimension is recommended instead of combining them into a single variable because researchers can explain more outcome variance (Colquitt et al., 2001).

The second question concerns proactive research as it relates to creating perceptions of procedural fairness—has additional conceptualizations of procedural justice contributed to the

overall understanding of procedural justice? Meta-analyses results concerning question two "showed that the historical progression of proactive research on procedural justice has in fact contributed to our ability to promote procedural fairness perceptions" (Colquitt et al., 2001, p. 435). The Leventhal et al. (1980) criteria have a significantly stronger relationship to procedural fairness perceptions than process control. "Conceptualizations of procedural justice are important even after control for distributive justice…when distributive justice was controlled, only Leventhal criteria and interpersonal justice retained their explanatory power" (Colquitt et al., 2001, p. 435).

The third question is—what is the relationship between dimensions of justice and organizational outcomes? The outcomes examined in this meta-analysis are those most common to the organizational justice literature – outcome satisfaction, job satisfaction, organizational commitment, trust, evaluation of authority, OCB, negative reactions, and performance (Colquitt et al., 2001). The researchers used three models to describe the relationship between justice dimensions and organizational outcomes—the distributive dominance model of Leventhal (1980), the two-factor model of Sweeney and McFarlin (1993), and the agent-system model of Bies and Moag (1986).

Leventhal's (1980) model is based on the argument that distributive justice is more salient than procedural justice. Results of the meta-analyses did not support this argument (Colquitt et al., 2001). Sweeney and McFarlin's (1993) two-factor model is based on their research findings that distributive justice predict two personal outcomes while procedural justice is a better predictor of two organizational outcomes. The meta-analyses provide support for outcome satisfaction, job satisfaction, organizational commitment, and evaluation of authority, but not for OCBs, withdrawal, and negative reactions. "The agent-system model predicts that interpersonal or informational justice will have stronger effects than procedural justice on agent-referenced variables but weaker effects than procedural justice on system-referenced variables. This model was supported for agent-referenced outcomes, including agent-referenced evaluation of authority and OCBs, but not for trust, which was more related to procedural and distributive justice. The agent–system model was also supported for job satisfaction, organizational commitment, and performance" (Colquitt et al., 2001, p. 437).

Hauenstein, McGonigle, and Flinder (2001) conducted a meta-analysis that examined the relationship between procedural and distributive justice. Since procedural justice was introduced in 1975, only studies occurring from that date forward reporting a correlation between procedural and distributive justice were included. Ninety-four correlations from 63 qualifying justice studies were examined in the meta-analysis. Results of the meta-analysis showed a strong correlation between procedural and distributive justice ($p = .64$). Additional results indicated a stronger correlation ($p = .72$) in a dispute-resolution context than in a reward allocation context ($p = .59$) (Hauenstein et al., 2001).

An important recommendation from Hauenstein et al. (2001) concerns using models in which general fairness perceptions are viewed as causal mechanisms rather than using models consisting of individual justice components. When justice constructs are used as predictors in the research design, general fairness perceptions should be used as the predictor instead of individual justice components. If a specific subcomponent is used, then all of the subcomponents should be used. Broadband measures of organizational justice should be avoided because of the likelihood of the items correlating with both procedural and distributive justice causing a confounding effect (Hauenstein et al, 2001).

Research Summary

This research focused on the literature pertinent to proactive behavior, trust, and justice. Four broad constructs of proactive behavior were examined along with several, more specific dimensions of proactive behavior that have been frequently discussed in the management and organizational sciences literature. Trust was examined using several models that explain trust formation in organizations, trust relationships between two individuals, and managers as initiators of trust in organizations. Organizational justice was examined using three dimensions of justice most often described in the literature—distributive justice, procedural justice, and interactional justice. Several recent meta-analyses of organizational justice studies were reviewed to provide a synopsis of frequently debated justice issues.

CHAPTER III

METHOD

This chapter includes information and details concerning the path analysis, hypotheses, instrumentation, sample, data collection procedures, variables, and data analysis of the study. The purpose of this study was to investigate the relationship among organizational justice, trust, and role breadth self-efficacy (RBSE). Regression analysis and path analysis, an extension of multiple regression, were the statistical procedures used to determine the relationships.

Path Model

Klem (1995) describes path analysis as an extension of multiple regression. Path analysis is a Structural Equation Modeling (SEM) technique that "allows a researcher to test a theory of causal order among a set of variables. *X* causes *Y,* and *Y* causes *Z*" (Klem, 1995, p. 65). Path analysis begins with a theory about the causal relationships among a set of variables. This theory is then translated into an *a priori* model with path diagrams that represents the causal relationships of the variables. Figure 3.1 illustrates the path model for this study.

Figure 3.1. An *a priori* path analysis model of the relationship among organizational justice, trust, and RBSE.

This path model is consistent with the relationships among the justice and trust variables described in the empirical research (e.g., Cohen-Charash & Spector, 2001; Cropanzano & Prehar, 1999; Malatesta & Byrne, 1997; Masterson, et al., 2000; Moye, Bartol, & Masterson 1997; Schminke, Ambrose, & Cropanzano 2000). Their relationship with role breadth self-efficacy (RBSE) had not been investigated prior to this study.

Path Diagrams

Path diagrams are drawn with causal flow from left to right. Rectangular boxes represent observed variables, which are determined *a priori* based on sound theory. Straight lines with arrows from one observed variable to another represent a relationship between the variables. The direction of the arrowheads indicates the causal relationships. These straight lines with single arrowheads represent direct effects. For example, Figure 3.1 posits a direct effect of procedural justice on trust in organization. Statistical estimates of direct effects are path coefficients and are comparable to multiple regression coefficients. Figure 3.1 also posits indirect effects—procedural justice on trust in organization: procedural justice affects trust in organization, and trust in organization in turn affects RBSE.

Hypotheses

The hypothesized model can be separated into two distinct paths. One path (Figure 3.2) hypothesizes the relationships among procedural justice, trust in organization, and RBSE.

Figure 3.2. Path one of the hypothesized path model.

Hypotheses 1, 2, and 3 are concerned with the relationship among the variables in this path.

H_1: Procedural justice has a direct effect on trust in organization.

H_2: Trust in organization has a direct effect on RBSE.

H_3: Procedural justice has an indirect effect on RBSE through trust in organization.

The second path (Figure 3.3) hypothesizes the relationships among interactional justice, trust in supervisor, and RBSE.

| Interactional Justice | → | Trust in Supervisor | → | RBSE |

Figure 3.3. Path two of the hypothesized path model.

Hypotheses 4, 5, and 6 are concerned with the relationship among the variables in this path.

H_4: Interactional justice has a direct effect on trust in supervisor.

H_5: Trust in supervisor has a direct effect on RBSE.

H_6: Interactional justice has an indirect effect on RBSE through trust in supervisor.

Instrumentation

Six measures were selected for this study based on their relationship to the theoretical arena and the nature of the hypotheses in this study. All measures show strong internal consistency and construct validity. In addition, several demographic questions are included.

Organizational Justice

Three dimensions of organizational justice were measured in this study—distributive justice, procedural justice, and interactional justice. Moorman (1991) used the Price and Mueller (1968) Distributive Justice Index (DJI) measure in addition to developing measures for procedural justice and interactional justice in his study of the relationship between justice and citizenship (Moorman, 1991).

Distributive Justice Index. The DJI is a six-item distributive justice scale that is designed to measure respondents' perceptions of the fairness of the rewards they receive from their organization. Price and Mueller (1986) define distributive justice as "the degree to which rewards and punishments are related to performance inputs" (p. 123). Three studies based directly on their work provide reliability and validity data for the measure. Cronbach's alpha scores of .94, .94, and .95 were reported in the three studies (Price & Mueller, 1986). Scale items

for the DJI were originally worded "I am fairly rewarded..." This wording seemed awkward; therefore, I changed the scale items to "I am rewarded fairly..."

__Procedural Justice and Interactional Justice Measures.__ Moorman's (1991) justice measure was used to measure procedural justice and interactional justice. His measure is the most comprehensive and most frequently used measure of procedural and interactional justice (Colquitt, 2001). Six items measure procedural justice—respondents' perceptions of the fairness of the formal procedures that are used by their organization. "Scale items focus on procedures designed to promote consistency, bias suppression, accuracy, correctability, representativeness, and ethicality" (Moorman, 1991, p. 847). Six items measure interactional justice—respondents' perceptions of the manner in which the organization's procedures are carried out (Moorman, 1991). Items in this scale focused on the interpersonal behavior of the supervisor towards subordinates (Moorman, 1991).

The procedural justice items focus on the organization, while the interactional justice items focus on the immediate supervisor, as this person is likely to be the organizational decision maker that employees interact with most and view as having a particularly strong impact on the organizational rewards that employees receive. All of the justice measures use a 5-point Likert-type scale with response categories (1 = Strongly Disagree; 5 = Strongly Agree).

Moorman (1991) conducted a confirmatory factor analysis (CFA) with the individual indicators of the three justice dimensions, a single dimensional scale of job satisfaction, and a five-factor model of citizenship. A CFA "examines the relationships among a set of measures and can be used to analyze the structure underlying either item intercorrelations or item covariances" (Bryant & Yarnold, 1995, p. 110). Results of Moorman's (1991) CFA showed "all indicators had significant loadings on their hypothesized latent variables and that no significant cross loadings existed" (Moorman, 1991, p. 849). Cronbach's alpha scores of the three justice dimensions provide evidence of strong reliability, i.e., distributive justice .94, procedural justice .94, and interactional justice .93 (Moorman, 1991).

__Trust__

Scott (1981) developed four trust measures that were based on the interpersonal relationships where varying degrees of trust could influence organizational effectiveness. Four categories of interpersonal relationships were identified: a) trust in immediate supervisor, b) trust

in peer group/work unit, c) trust in top management, and d) trust in the management development consultant. The measures were administered three times over a six-month period, initially (time 1), three months later (time 2), and another three months later (time 3).

Items were written for each trust relationship using trust literature and adapting items from other trust scales. Four evaluators familiar with the trust literature then reviewed the scale items. The best trust items were selected to include in a 29-item questionnaire. Scott (1981) performed a factor analysis (varimax extraction and orthogonal rotation) to ensure that the items were assigned to the appropriate scales. This 29-item questionnaire was administered at time 1 of his study.

Scott (1981) reduced the number of questionnaire items to 17 prior to administration at time 2 and time 3. "This reduction in the number of items had only a minor effect on the alpha coefficients, reducing them by less than .3% on any one scale" (Scott, 1981, p. 108). A factor analysis performed after the reduction in number of items shows that items were appropriately assigned to one of the four measures. This revised questionnaire was used at time 2 and time 3. "T-test results of data collection at times 1, 2, and 3 provided no significant difference between mean scores of the trust in supervisor, peers, and management across time, which indicates reliability of these trust measures.... The trust measures are found to be consistent with the conceptual framework of trust, they are internally consistent [Cronbach's alpha scores in Table 3.1], identify different trust variables, and are stable over time" (Scott, 1981, p. 108-109).

According to Scott, "specific, situational measurement of trust is a stronger predictor of behavior than a general measurement of trust" (Scott, 1981, p. 107). Therefore, only two of Scott's measures—trust in the immediate supervisor, hereafter referred to as "trust in supervisor," and trust in top management, hereafter referred to as "trust in organization," are appropriate for this study. Factor analysis results of the items in these two measures indicate two factors with an eigenvalue of approximately 1.0 or greater, explaining 48% of the variance.

The 5-item self-report trust in supervisor measure focuses specifically on the perceived trust an employee has regarding his/her immediate supervisor. The 4-item trust in organization measure focuses on employee perceived trust in their relationship with their employing organization. Both measures use a 5-point Likert-type scale with response categories (1 = Strongly Disagree; 5 = Strongly Agree).

Role Breadth Self-Efficacy (RBSE)

Parker (1998) developed a 10-item questionnaire designed to measure an employee's RBSE. Through interviews with staff, she was able to identify 10 nontechnical tasks involving proactive, interpersonal, and integrative competencies that were most likely to be generalizable to other organizations. "The aim was to represent important exemplar elements of an expanded role that apply across jobs and hierarchical levels" (Parker, 1998, p. 839). By nontechnical tasks, Parker (1998) is referring to tasks beyond those required in the job description. She noted, "There is no reason to expect a distinction between tasks that involve proactive, interpersonal, or integrative competencies because these overlap a great deal. The main point is that all of the tasks involve competencies that extend beyond technical ones" [Parker, 1998, p. 839]. The questionnaire was utilized in two studies, one cross-sectional and one longitudinal.

In the cross-sectional study (Study 1), data were collected from 669 glass manufacturing employees. Parker (1998) performed a confirmatory factor analysis (CFA) to test models of increasing complexity to determine whether the RBSE items assessed a construct that was internally consistent and that was distinct from related constructs of proactive personality and self-esteem. "All RBSE items, proactivity personality items, and self-esteem items were included in a CFA test" (Parker, 1998, p. 840).

Models that were tested included a null model with zero covariances between items, a one-factor model to check if the items consisted of only a single construct, a two-factor model with RBSE and self-esteem as one factor and proactive personality as another, a second two-factor model with RBSE and proactive personality as one factor and self-esteem as the other factor, and a three-factor model with one factor for each scale. Parker also tested the models for goodness of fit. She used the chi-square statistic, nonnormed fit index (NNFI), and comparative fit index (CFI). The three-factor model proved to be the best fit. "The CFA results show that the RBSE items were assessing a different construct than the proactive personality and self-esteem items, and that the self-efficacy items were related to each other" (Parker, 1998, p. 840). Scores from the 10-items were summed to form a single scale (Cronbach's alpha .96). The scale measures proactive, interpersonal, and integrative competencies that represent an expanded role across jobs and hierarchical levels using a 5-point Likert-type scale with response categories from 1 (not at all confident) to 5 (very confident).

Parker (1998) also compared occupational categories that are more likely to involve proactive, interpersonal, and integrative tasks, e.g., managerial and professional positions, with occupations less likely to encompass such tasks, e.g., shopfloor and clerical positions. "These occupational groups not only vary in their job requirements, but members of the former group, particularly the managers, are likely to have been selected on the basis of broad, proactive, and integrative skills" (Parker, 1998, pp. 840-841). Managers and supervisors had the highest levels of RBSE, and shopfloor and clerical employees had the lowest levels. "These occupational differences were consistent with *a priori* expectations, providing further evidence of the scale's validity" (Parker, 1998, p. 841).

In the longitudinal study, data were collected from 459 employees in a plant that manufactures large vehicles. Questionnaires were administered twice over an 18-month period. Parker (1998) performed a CFA based on the RBSE items and found that a one-factor model was a reasonable fit to the data and that the null model was a poor fit. Cronbach's alpha for the RBSE items in the longitudinal study was .95 at Time 1 and .96 at Time 2. Table 3.1 provides a list of measures to be used in this study.

Table 3.1

List of Measures in This Study

Measure	Author	No. of items	Cronbach's alpha
Distributive Justice	Price & Mueller, 1986	6	(.94)[a]
Procedural Justice	Moorman, 1991	6	(.94)
Interactional Justice	Moorman, 1991	6	(.93)
Trust in Organization	Scott, 1981	4	(.91) (.77) (.80)[b]
Trust in Supervisor	Scott, 1981	5	(.82) (.77) (.86)[b]
RBSE	Parker, 1998	10	(.96) (.95) (.96)[b]

[a]This is the Cronbach's alpha score on the DJI in Moorman's 1991 study. [b]Multiple Cronbach alpha scores indicate more than one study was performed.

Demographic Data

Demographic information was gathered in the final section of the questionnaire (see Appendix A) including gender, occupation, experience in current position, length of time served with immediate supervisor, and level of education. The gender categorical variable was treated as if it was interval by numerically coding it in the following manner: male = 1, female = 0. Information about occupation was gathered by having each respondent select his or her occupation type from among eight occupational categories. Seven categories offered broad, white-collar and professional occupational choices. One category was listed as *other* for those occupations that did not fit the listed selection. Since many of the questionnaires were gathered within organizations, occupation categories were intentionally broad so that individuals engaging in a unique occupation could not be identified through their occupation. Respondents indicated their experience in current position and length of time served with immediate supervisor by writing number of years and months in blank spaces. Six categories of educational level were available for respondent selection. Responses for occupation, experience in current job, length of time with supervisor, and education were all numerically coded.

Sample

The sample for this study came from professional and white-collar employees in large and small public and private organizations. The relationship of the variables being investigated— individual perceptions of organizational justice, trust, and RBSE—is individual, not organization dependent. Consequently, the data were aggregated, and no analysis was conducted linking individual responses to a specific organization. Organizations ranged in size from a few employees to over 50,000 employees.

An individual in each organization was selected to distribute questionnaires within his/her organization. A total of 350 questionnaires were distributed; of these, 202 were returned. Several of the organizations also distributed the questionnaire via email to employees in field offices. Twenty-seven email questionnaires were returned, bringing the overall response to 229. Three questionnaires were eliminated due to missing data in entire sections (e.g., RBSE), leaving a balance of 226 subjects for this study. The percentage of overall responses was not calculated because there was no effective way for organizations to keep track of distribution of the email version.

Respondents included subordinates, supervisors, and middle managers engaged in administrative, business management, computer specialties, engineering, human resources, information technology, project management, or other professional or white-collar work.

Data Collection Procedures

Data were collected in several ways. A few large organizations were offered a free two-hour seminar in exchange for participation, while other organizations were simply asked to participate without any reciprocal arrangement. A few individuals were contacted via direct phone, mail, or email solicitation.

I offered several organizations a free two-hour seminar for supervisors and coworkers of deaf and hard-of-hearing employees (Appendix B) in exchange for asking seminar attendees to complete my questionnaire voluntarily. Even though several organizations indicated an interest in the mutual exchange, ultimately only one organization accepted this offer. Three, two-hour seminars were held at the organization headquarters. Field office personnel from across the United States participated via closed circuit television system. A general information sheet, questionnaire, and Informed Consent form, along with a letter-size, return-addressed envelope was distributed to each seat prior to the start of each seminar. Attendees were asked to voluntarily complete the questionnaire and Informed Request form, seal in the envelope, and drop off at the head table. Prepaid postage was provided for those unable to complete the questionnaire at the seminar. Organizational personnel distributed either hard copy or email questionnaire packets to field office personnel who attended a seminar via closed circuit television. The email version was the same as the hard copy version except that respondents were asked to underline their choices instead of circling, and to type their names and initials on the signature line of the Informed Consent form.

Individuals in organizations that did not have a seminar simply distributed questionnaire packets within the organization. Direct solicitation resulted in responses returned in postage-paid envelopes or via email.

Predictor, Criterion, and Control Variables

Regression Analysis

      Variables in regression analysis are referred to as predictor (independent) and criterion (dependent). A regression may also include one or more control variables. According to Hauenstein, McGonigle, and Flinder (2001), distributive justice sometimes correlates with procedural and interactional justice and could possibly cause a confounding effect (Hauenstein, McGonigle, and Flinder 1997). Therefore, in this study, distributive justice was used as a control variable so that each of the independent contributions of procedural and interactional justice on RBSE can be determined. Predictor, criterion, and control variables are shown in Table 3.2.

Table 3.2

List of Variables for Regression Analysis

Control Variable	Predictor Variables	Criterion Variable
Distributive Justice	Procedural Justice	RBSE
	Interactional Justice	
	Trust in Organization	
	Trust in Supervisor	

Path Analysis Variables

      Variables that have only straight arrows pointing from them to another variable are exogenous variables (predictor variables). Exogenous variables in this study are procedural justice and interactional justice. "Two-headed arrows show relationships among exogenous variables. These relationships are hypothesized to exist, but their causal structure is not explicated by the model" (Klem, 1995, p. 73). As can be seen in Figure 3.1, distributive justice, procedural justice, and interactional justice have two-headed arrows. Variables with arrows pointing from another variable to them are endogenous variables (criterion variables). Organizational trust, trust in supervisor, and RBSE are endogenous (criterion) variables.

"A variable that intervenes between two variables in a path model is hypothesized to function as a mediator between the two variables. The variable does function as a mediator variable if the path coefficients are sizable enough to establish that some of the causal influence is traveling on the indirect route" (Klem, 1995, p. 75). In Figure 3.1, trust in organization is considered an endogenous variable because it affected by the antecedent variable procedural justice. It is also considered a mediation variable because it mediates the effect of procedural justice on RBSE. Trust in supervisor is also an endogenous variable because it is affected by interactional justice and a mediation variable because it mediates the effect of interactional justice on RBSE. Path analysis variables for this study are shown in Table 3.3.

Table 3.3

List of Variables for Path Analysis

Exogenous Variables	Mediator and Endogenous Variables	Endogenous Variable
Procedural Justice	Trust in Organization	RBSE
Interactional Justice	Trust in Supervisor	

Demographic Variables

Five demographic variables (Table 3.4) were included in this study. Parker (1998) found that women had lower RBSE than men in both of her studies. Results of an investigation of the relationship between gender and RBSE in this study can be compared with the results of her discovery. Type of occupation and RBSE were investigated in an effort to determine if a relationship exists between these variables. The relationship between experience in current job and RBSE was investigated to determine if RBSE is enhanced by longevity. Length of relationship with immediate supervisor may also potentially enhance RBSE; therefore, this relationship was investigated. Parker (1998) also found that managers and supervisors had the highest level of RBSE of all employees. Many managerial and supervisory positions require a four-year college degree in order for an individual to hold or be considered for these types of job

positions. Level of education and RBSE may have an important relationship; therefore, this relationship was investigated in this study.

I coded the categorical data in the demographic section numerically. For example, gender was coded 0 for female and 1 for male. For descriptive purposes, I collapsed the overall responses from experience in current job into six categories and the length of relationship with immediate supervisor into five categories. Table 3.4 presents a list of the demographic variables along with the coding used in this study.

Table 3.4

Numerical Coding of Demographic Variables in This Study

Demographic Variable	Code
Gender	
Female	0
Male	1
Occupation	
Administrative	1
Business Management	2
Computer Specialist	3
Engineer	4
Human Resources	5
Information Technology	6
Program Management	7
Other	8
Experience in Current Job	
Less than 1 year	1
1 – 3 years	2
3 – 5 years	3
5 – 10 years	4
10 – 20 years	5
20 years or more	6
Length of Relationship With Supervisor	
Less than 1 year	1
1 – 3 years	2
3 – 5 years	3
5 – 10 years	4
10 years or more	5
Education	
Some High School	1
HS/GED	2
Some College	3
Bachelor's	4
Master's	5
Doctoral	6

Data Analysis

SPSS for Windows, Version 11.0 and AMOS 4.0 were used for data analysis. I initially entered the raw data into an Excel 2000 spreadsheet. The Trust in Organization measure items were written in reverse fashion in the questionnaire; I transposed the responses in the Excel database. I printed the raw data and manually double-checked it for accuracy. I then copied and pasted the data into SPSS 11.0.

I examined each questionnaire for completeness and eliminated three because whole sections were blank. Seventeen random missing values were also accounted for and assigned values through an SPSS transformation process. Data were excluded listwise in analyses, where appropriate. I used SPSS to transform single-item scores of each of the scales into a composite score of means on each scale for all respondents. These scores were subsequently used as the basis for further analysis.

I screened the data using stem and leaf diagrams, box plots, histograms (Appendix C), and scatterplots (Appendix C). I ran a frequency distribution to examine the normalcy of data by group and found some skewness. I eliminated the responses containing the outliers and ran another frequency distribution. (See Appendix C for a comparison.) In addition, I used the SPSS "Explore" descriptive statistics procedure to capture the means, medians, and 5% trimmed means of the samples with and without outliers for comparison. I ran Log 10 and Square Root power transformations (Appendix D).

I performed a scale reliability analysis to evaluate the reliability of the scales. I ran regressions to determine the effect of predictor and mediator variables on the criterion variable. I ran One-Way ANOVAs with homogeneity and post hoc tests to determine relationships between demographic variables and the criterion. I compared means in order to determine effect size. Finally, I used AMOS 4.0 to conduct a path analysis to examine the relationship among the exogenous (predictor) and endogenous (criterion) variables. Results of the analyses are in Chapter IV.

Chapter Summary

This chapter includes information about path analysis, the hypotheses, subjects, instrumentation, procedures, and data analysis. Table 3.5 provides summaries of the data analysis

procedures used in this study. Results of the analyses are presented in Chapter IV. Conclusions

and recommendations are presented in Chapter V.

Table 3.5

Summary of Data Analysis Procedures Using SPSS 11.0 for Windows

Data Screening

   1. Stem & Leaf Diagrams
   2. Box Plots
   3. Histograms
   4. Scatterplots
   5. Descriptive – 5% Trimmed Means

Frequencies

   6. Gender
   7. Education Level
   8. Occupation
   9. Experience in Current Job
   10. Length of Relationship With Immediate Supervisor

Statistics

   11. Scale Reliability Analysis
   12. Descriptive Statistics
   13. Correlation
   14. Regression Coefficients & Test of Mediation
   15. Transformations – Log 10 and Square Root
   16. One-Way ANOVAs
   17. Bonferroni Post Hoc Test
   18. Levene Test - Homogeneity of Variances
   19. Measures of Association

Summary of Data Analysis Procedures Using AMOS 4.0

Frequencies

   20. Variable and Parameter Summaries
   21. Regression Weights
   22. Correlations
   23. Covariances
   24. Direct and Indirect Effects
   25. Fit Measures
   26. Path Coefficients

CHAPTER IV

RESEARCH FINDINGS

The purpose of this study was to investigate the relationships among organizational justice, trust, and role breadth self-efficacy (RBSE). This chapter presents a description of the sample, preliminary analyses, sample statistics, relationships between constructs, and demographic comparisons to address each of the relationships depicted in the hypothesized model (Figure 4.1). The chapter concludes with a summary of the results.

Figure 4.1. Hypothesized path model.

Demographic Profile of the Sample

The data for this study were obtained from white-collar professional employees in large and small organizations. As shown in Figure 4.2, the sample composition was 59% females and 41% males.

Figure 4.2. Number of male and female participants in this study.

Occupational categories for respondents are identified in Table 4.1. The largest number of employees is found in the category labeled *Other*. Occupational choices available in the questionnaire were intentionally broad in order to prevent possible identification of individuals due to occupation. Categories were not predefined; respondents were asked to self-select the category they felt best represented their occupation. The *Other* category was offered as an alternative to ensure anonymity. Numerous individuals may have selected this option for that reason. Technology occupations—Computer Specialist, Engineering, and Information Technology—make up only 10% of this sample.

Table 4.1

Frequency Distribution for Type of Occupation

	Count	Percent
Administrative	26	11.5
Business Management	22	9.7
Computer Specialist	13	5.8
Engineer	4	1.8
Human Resources	33	14.6
Information Technology	6	2.7
Program Management	30	13.3
Other	91	40.4
Total	225	99.6
Missing	1	.4
Total	226	100.0

The average number of years in current job was 7.36 years (sd = 7.63). Approximately 50% of employees had been in their current job five years or less, while less than 10% had been in the same job for 20 years or more. Table 4.2 provides details about employee time in current job.

Table 4.2

Frequency Distribution for Employee Experience in Current Job

	Frequency	Percent	Mean	Median	Std. Deviation
Less than 1 year	16	7.1			
1 – 3 years	67	29.6			
3 – 5 years	39	17.3			
5 – 10 years	47	20.8			
10 – 20 years	38	16.8			
20 years or more	17	7.5			
Total	224	99.1	7.36	5.00	7.63
Missing	2	.9			
Total	226	100.0			

Table 4.3 shows that just over 60% of employees had served under their immediate supervisor less than three years, while less than 10% worked under the same supervisor for 10 years or more.

Table 4.3

Frequency Distribution for Employee Length of Relationship With Immediate Supervisor

	Frequency	Percent	Mean	Median	Std. Deviation
Less than 1 year	33	14.6			
1 – 3 years	103	45.6			
3 – 5 years	40	17.7			
5 – 10 years	31	13.7			
10 years or more	19	8.4			
Total	226	100.0	3.94	2.71	4.24
Missing	0	0			
Total	226	100.0			

Table 4.4 shows that approximately 70% of employees have a college degree, with 48% of these graduates also holding an advanced degree. Overall, 93% of employees had a post-high school education.

Table 4.4

Education Level of Study Sample

	Count	Percent
Some HS	1	.4
HS/GED	15	6.6
Some College	52	23.0
Bachelor's	82	36.3
Master's	68	30.1
Doctoral	8	3.5
Total	226	100.0

Preliminary Analyses

Instrument Summary

Six measures described in Chapter III were used in this study. Three justice measures—distributive justice, procedural justice, and interactional justice; two trust measures—trust in organization and trust in supervisor; and one RBSE scale were utilized. Each of the measures demonstrated strong internal consistency and construct validity in other studies.

Cronbach's alpha scores reported in other studies for the three justice measures were .94, .94, and .93. In this study, Cronbach's alphas for the three justice measures were almost identical to previous studies, i.e., .94, .92, and .93. Cronbach's alpha for trust in organization reported in other studies was measured at three intervals and yielded scores of .91, .77, and .80 respectively. In this study, trust in organization was measured only once and yielded a Cronbach alpha score of .71. Trust in supervisor, also measured at three intervals in other studies, brought Cronbach alpha scores of .82, .77, and .86, while this study yielded a score of .93. In two previous studies

of RBSE, Cronbach alpha scores were .96, .95, and .96. This study produced a Cronbach alpha score of .92. The alpha scores indicated that the six measures were appropriate for this study.

Data Screening

I ran histograms for the sample with and without outliers to compare the data distribution and found some skewness. I found 21 outliers through data screening with scatterplots, stem and leaf diagrams, and box plots. I manually rechecked each questionnaire and found no particular reason for the outliers. I ran descriptive statistics of the total sample (*n*=226). I then eliminated the outliers and ran another set of descriptive statistics of the sample (*n*=205) without the outliers. Eliminating outliers had a slight effect on the distribution as illustrated in the histograms (Figures 4.3 & 4.4).

Std. Dev = .74
Mean = 4.03
N = 226.00

Figure 4.3. Distribution of responses to RBSE measure with outliers.

Std. Dev = .68
Mean = 4.04
N = 205.00

RBSE Measure

Figure 4.4. Distribution of responses to RBSE measure without outliers.

I removed 29 responses to RBSE that had an average score of 5.0. The scatterplots improved slightly, but not enough to consider elimination of the 29 responses. Scatterplots of the remaining 197 responses can be found in Appendix F. I also ran two data transformations— logarithm and square root—that are designed to improve sample symmetry. I ran correlations with the logarithm transformation. The results were negligible (see Appendix D).

I compared the means, trimmed means, and median of the sample with and without outliers (Table 4.5). The results show there is little difference. With so little difference in samples following statistical manipulation, I decided to use the larger group with the outliers (n=226) for all analyses in this study because of the richness of data in a larger sample.

Table 4.5

Comparison of Means, 5% Trimmed Means, and Medians of the Sample With Outliers (N= 226) and the Sample Without Outliers (N=205)

Variable	N=226			N=205		
	Mean	5% Trimmed Mean	Median	Mean	5% Trimmed Mean	Median
Distributive Justice	3.29	3.30	3.33	3.38	3.40	3.33
Procedural Justice	3.17	3.19	3.17	3.25	3.26	3.33
Interactional Justice	3.89	3.96	4.00	4.03	4.07	4.00
Trust in Organization	3.51	3.54	3.50	3.58	3.58	3.50
Trust in Supervisor	3.83	3.90	4.00	3.40	4.03	4.00
RBSE	4.03	4.07	4.10	4.04	4.06	4.10

Sample Statistics

Table 4.6 shows the descriptive statistics for the study sample. Only two categories indicated missing responses, and the total number of missing responses for these variables was three. The means for RBSE and education were quite high in this sample.

Table 4.6

Descriptive Statistics for the Study Sample

	N		Mean	SD
	Valid	Missing		
1. Distributive Justice	226	0	3.29	1.05
2. Procedural Justice	226	0	3.17	.90
3. Interactional Justice	226	0	3.89	.93
4. Trust in Organization	226	0	3.51	.81
5. Trust in Supervisor	226	0	3.83	1.01
6. RBSE	226	0	4.03	.74
7. Gender	226	0		
8. Occupation	225	1		
9. Experience in Current Job	224	2	7.36	7.63
10. Length of Relationship With Immediate Supervisor	226	0	3.93	4.24
11. Education	226	0	4.00	.99

Table 4.7 provides data from a correlation analysis of all of the variables in this study.

Table 4.7

Correlations for the Study Sample

	1	2	3	4	5	6	7	8	9	10	11
1. Distributive Justice		.504**	.457**	.310**	.448**	-.025	.105	.035	-.037	.033	-.147*
2. Procedural Justice			.385**	.508**	.334**	.111	.040	-.070	-.070	.004	.011
3. Interactional Justice				.226**	.905**	.076	.101	-.133*	.051	-0.47	-.151*
4. Trust in Organization					.178**	-.002	-.059	-.148*	-.113	-.028	.053
5. Trust in Supervisor						.057	.045	-.100	-.012	-.040	-.206**
6. RBSE							.078	-.147*	.118	.067	.274**
7. Gender								-.069	.069	-.122	-.004
8. Occupation									.095	.183**	-.133*
9. Experience in Current job										.446**	.045
10. Length of Relationship with Immediate Supervisor											.099
11. Education											

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

Relationship Between Constructs

A correlation analysis was used to examine the relationships between distributive justice, procedural justice, interactional justice, trust in organization, trust in supervisor, and RBSE for n = 226 subjects. The correlations and alphas are reported in Table 4.8. The statistically significant correlation between procedural justice and distributive justice lends support for using distributive justice as a control variable. The statistically significant relationship between procedural justice and trust in organization is consistent with the justice literature, as is the statistically significant relationship between interactional justice and trust in supervisor.

No statistically significant correlations were found between the predictor variables and RBSE. Hierarchical regression analyses were still conducted and the results are reported in Appendix E.

Table 4.8

Correlations, and Alphas of the Control, Predictor, and Criterion Variables (N =223)

Variable	1	2	3	4	5	6
1. Distributive Justice	.94	.504**	.457**	.310**	.448**	-.025
2. Procedural Justice		.92	.385**	.508**	.334**	.111
3. Interactional Justice			.93	.226**	.905**	.076
4. Trust in Organization				.71	.178**	-.002
5. Trust in Supervisor					.93	.057
6. RBSE						.92

Note. Alphas are on the diagonal.

**$p < .01$.

Path Analysis

I also performed a path analysis using AMOS 4.0. I tested the hypothesized path model (Figure 4.5) and found the path coefficients and correlations comparable to the regression coefficients and correlations above. The direct effects (.01) of Trust in Organization to RBSE and Trust in Supervisor (.04) to RBSE were quite small, indicating very weak relationships. Indirect effects are not shown in Figure 4.5, but they are quite small as well, which also indicates weak relationships. The Goodness of Fit Index (GFI) and Normed Fit Index (NFI) indicated that the observed data fit the model. However, "fit of a model does not confirm the correctness of a model" (Klem, 1995, p. 78). Because the path analysis offered basically the same results as the regression analysis, I decided there was no reason to present those same results again.

Figure 4.5. Path coefficients of hypothesized model.

Demographic Comparisons

A correlation analysis was also used to examine the relationships of the demographic variables and RBSE (Table 4.9). Gender did not have any statistically significant correlations with other demographic variables in this study. Occupation did have a statistically significant relationship with length of relationship with immediate supervisor, education, and RBSE. Experience in current job had a statistically significant relationship with length of relationship with immediate supervisor. The results also show that education had a statistically significant relationship with RBSE.

Table 4.9

Correlations of the Demographic Variables and RBSE (N = 223)

	2	3	4	5	6
1. Gender	-.069	.069	-.122	-.004	.078
2. Occupation		.095	.183**	-.133*	-.147*
3. Experience in current job			.446**	.045	.118
4. Length of relationship with immediate supervisor				. 099	.067
5. Education					.274**
6. RBSE					

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

In order to further investigate the demographic variables and RBSE, I recoded some of the demographic data in order to run One-Way ANOVAs. This was necessary because several demographic variables had too few responses for meaningful analyses. For example, eight categories were used in this study to investigate type of occupation of respondents. One occupation category had only four responses, and another had only six. Therefore, I combined occupation categories that were similar in order to produce more meaningful results. Variables that were recoded are presented in various tables below. Additionally, when results of the One-Way ANOVAs indicated statistically significant relationships, I ran post hoc tests to determine which means were different. I ran Levene Tests and found that the homogeneity of variance assumption was tenable in each case.

Table 4.10 shows the results of the One-Way ANOVA comparing the means of gender and predictor and criterion variables in this study. Gender did not need to be recoded because there were sufficient responses by both male and female. The *p* values indicate that there were no statistically significant differences between the gender means and the predictor or criterion means.

Table 4.10

Analysis of Variance for Predictor, Criterion, and Gender Variables

Gender	Sum of Squares	df	Mean Squares	F	p
Procedural Justice					
Between groups	.263	1	.263	.323	.570
Within groups	182.482	224	.815		
Total	182.745	225			
Interactional Justice					
Between groups	1.600	1	1.600	1.856	.174
Within groups	193.134	224	.862		
Total	194.735	225			
Trust in Organization					
Between groups	.478	1	.478	.725	.395
Within groups	147.625	224	.659		
Total	148.104	225			
Trust in Supervisor					
Between groups	.305	1	.305	.297	.586
Within groups	229.885	224	1.026		
Total	230.190	225			
RBSE					
Between groups	.865	1	.865	1.576	.211
Within groups	122.914	224	.549		
Total	123.778	225			

Table 4.11 shows recoded categories for type of occupation. The eight original categories were recoded into three new categories. Even though the Administration and Other categories were much larger than the Technical category, after recoding there were enough responses in the Technical category for meaningful analyses.

Table 4.11

New Categories for Occupation Following Recoding

Occupation Old Category	Old Code	*N*	Occupation New Category	New Code	*N*
Administrative[a]	1	26	Administration[a]	1	111
Business Management[a]	2	22	Technical[b]	2	23
Computer Specialist[b]	3	13	Other[c]	3	91
Engineer[b]	4	4			
Human Resources[a]	5	33			
Information Technology[b]	6	6			
Program Management[a]	7	30			
Other[c]	8	91			
Missing		1	Missing		1
Total		226	Total		226

[a.] Occupational category 1

[b.] Occupational category 2

[c.] Occupational category 3

The p value (.002) in Table 4.12 shows there was a statistically significant difference between the means of type of Occupation and the means of RBSE, $F(2, 222) = 6.437$, $p = .002$.

Table 4.12

Analysis of Variance for Predictor, Criterion, and Occupation Variables

Occupation	Sum of Squares	df	Mean Squares	F	p
Procedural Justice					
Between groups	1.969	2	.984	1.212	.300
Within groups	180.338	222	.812		
Total	182.307	224			
Interactional Justice					
Between groups	3.454	2	1.727	2.005	.137
Within groups	191.268	222	.862		
Total	194.722	224			
Trust in Organization					
Between groups	1.259	2	.630	.952	.388
Within groups	146.811	222	.661		
Total	148.071	224			
Trust in Supervisor					
Between groups	3.308	2	1.654	1.619	.200
Within groups	226.881	222	1.022		
Total	230.189	224			
RBSE					
Between groups	6.778	2	3.389	6.437	.002
Within groups	116.866	222	.526		
Total	123.644	224			

Since the F-values in Table 4.12 indicated statistically significant differences in means between occupation and RBSE, I ran a Bonferroni post hoc test to determine which means were different.

Table 4.13 presents the results of the Bonferroni post hoc test.

Table 4.13

Bonferroni Post Hoc Pairwise Multiple Comparisons of Occupation With RBSE

Occupation	Occupation	Mean Difference	*M*	Std. Error	Sig.
Administration	Technical	-.2778	4.1135	.16622	.288
	Other	.2652*		.10260	.031
Technical	Administration	.2778	4.3913	.16622	.288
	Other	.5431*		.16933	.005
Other	Administration	-.2652*	3.8482	.10260	.031
	Technical	-.5431*		.16933	.005

*p < .05.

Table 4.13 shows the mean of the Technical occupation category is statistically significant different from the means of Administration and Other. There is also a statistically significant difference between means of Administration and Other.

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Table 4.14 shows three new categories of education recoded from six original categories.

Table 4.14

New Categories for Education Following Recoding

Education Level Old Category	Old Code	*N*	Education Level New Category	New Code	*N*
Some High School[a]	1	1	Non-College Degree[a]	1	68
High School/GED[a]	2	15	Bachelor's[b]	2	82
Some College[a]	3	52	Graduate[c]	3	76
Bachelor's[b]	4	82			
Master's[c]	5	68			
Doctoral[c]	6	8			
Total		226	Total		226

[a] Education level category 1

[b] Education level category 2

[c] Education level category 3

Table 4.15 shows the results of a One-Way ANOVA that determined there was a statistically significant difference between the means of Education and the means of Interactional Justice, F(2, 223) = 3.575, p = .030; a statistically significant difference between the means of Education and the means of Trust in Supervisor, F(2, 223) = 7.354, p .001; and a statistically significant difference between the means of Education and the means of RBSE, F(2, 223) = 11.443, p .0005.

Table 4.15

Analysis of Variance for Predictor, Criterion, and Education Variables

Education	Sum of Squares	df	Mean Squares	F	p
Procedural Justice					
Between groups	.392	2	.196	.240	.787
Within groups	182.354	223	.818		
Total	182.745	225			
Interactional Justice					
Between groups	6.049	2	3.024	3.575	.030
Within groups	188.686	223	.846		
Total	194.735	225			
Trust in Organization					
Between groups	.461	2	.230	.348	.706
Within groups	147.643	223	.662		
Total	148.104	225			
Trust in Supervisor					
Between groups	14.242	2	7.121	7.354	.001
Within groups	215.947	223	.968		
Total	230.190	225			
RBSE					
Between groups	11.521	2	5.760	11.443	.000
Within groups	112.257	223	.503		
Total	123.778	225			

Results of the Bonferroni post hoc test provided in Table 4.16 show there is a statistically significant difference in RBSE between the means of a graduate degree and the means of the other education categories. There is also is a statistically significant difference in RBSE between the means of a Bachelor's degree and the means of the non-degree category.

Table 4.16

Bonferroni Post Hoc Pairwise Multiple Comparisons of Education With RBSE

Education	Education	Mean Difference	*M*	Std. Error	Sig.
Non-Degree	Bachelor's	-.2395	3.7569	.16637	.122
	Graduate	-.5624*		.11843	.000
Bachelor's	Non-Degree	.2395	3.9965	.11637	.122
	Graduate	-.3228*		.11297	.014
Graduate	Non-Degree	.5624*	4.3193	.11843	.000
	Bachelor's	.3228*		.11297	.014

*p < .05.

Concerning Education and Interactional Justice, Table 4.17 shows that there is a statistically significant difference in the means of the Non-degree, Bachelor's, and graduate categories.

Table 4.17

Bonferroni Post Hoc Pairwise Multiple Comparisons of Education With Interactional Justice

Education	Education	Mean Difference	*M*	Std. Error	Sig.
Non-Degree	Bachelor's	.3051	4.1324	.15087	.133
	Graduate	.3933*		.15355	.033
Bachelor's	Non-Degree	-.3051	3.8272	.15087	.133
	Graduate	.0882		.14646	1.000
Graduate	Non-Degree	-.3933*	3.7390	.15355	.033
	Bachelor's	-.0882		.14646	1.000

*p < .05.

Table 4.18 shows that concerning Education and Trust in Supervisor, there is a statistically significant difference in the means of the Non-degree, Bachelor's, and graduate categories.

Table 4.18

Bonferroni Post Hoc Pairwise Multiple Comparisons of Education With Trust in Supervisor

Education	Education	Mean Difference	*M*	Std. Error	Sig.
Non-Degree	Bachelor's	.4986*	4.2059	.16140	.007
	Graduate	.5875*		.16426	.001
Bachelor's	Non-Degree	-.4986*	3.7073	.16140	.007
	Graduate	.0889		.15669	1.000
Graduate	Non-Degree	-.5875*	3.6184	.16426	.001
	Bachelor's	-.0889		.15669	1.000

*p < .05.

Table 4.19 shows the results of recoding six categories of experience in current job into three new categories.

Table 4.19

New Categories for Experience in Current Job Following Recoding

Experience Old Category	Old Code	*N*	Experience New Category	New Code	*N*
1 - 11 months[a]	1	15	3 years or less[a]	1	73
12 - 35 months[a]	2	58	3 – 10 years[b]	2	93
36 - 59 months[b]	3	35	10 years or more[c]	3	58
60 - 119 months[b]	4	58			
120 – 239 months[c]	5	37			
240 months or more[c]	6	21			
Missing		2			2
Total		226	Total		226

[a.] Experience category 1

[b.] Experience category 2

[c.] Experience category 3

The *p* values in Table 4.20 indicate that there were no statistically significant differences between the means of experience in current job and the means of the predictor or criterion variables; therefore, no post hoc tests of experience in current job were conducted.

Table 4.20

Analysis of Variance for Predictor, Criterion, and Experience in Current Job Variables

Experience	Sum of Squares	df	Mean Squares	*F*	*p*
Procedural Justice					
Between groups	1.089	2	.545	.663	.516
Within groups	181.596	221	.822		
Total	182.685	223			
Interactional Justice					
Between groups	4.237	2	2.118	2.490	.085
Within groups	188.009	221	.851		
Total	192.246	223			
Trust in Organization					
Between groups	1.786	2	.893	1.350	.261
Within groups	146.247	221	.662		
Total	148.033	223			
Trust in Supervisor					
Between groups	2.579	2	1.290	1.268	.284
Within groups	224.836	221	1.017		
Total	227.416	223			
RBSE					
Between groups	1.071	2	.535	.967	.382
Within groups	122.287	221	.553		
Total	123.357	223			

Length of relationship with immediate supervisor had sufficient responses in each category and was not recoded. The *p* values in Table 4.21 indicate that there were no statistically significant differences between the means of the length of relationship with immediate supervisor and the means of the predictor or criterion variables; therefore, no post hoc tests of length of relationship with immediate supervisor were conducted.

Table 4.21

Analysis of Variance for Predictor, Criterion, and Length of Relationship With Immediate Supervisor Variables

Length of Relationship	Sum of Squares	df	Mean Squares	F	p
Procedural Justice					
Between groups	4.280	4	1.070	1.325	.262
Within groups	178.466	221	.808		
Total	182.745	225			
Interactional Justice					
Between groups	6.284	4	1.571	1.842	.122
Within groups	188.450	221	.853		
Total	194.735	225			
Trust in Organization					
Between groups	2.502	4	.626	.950	.436
Within groups	145.601	221	.659		
Total	148.104	225			
Trust in Supervisor					
Between groups	3.621	4	.905	.883	.475
Within groups	226.568	221	1.025		
Total	230.190	225			
RBSE					
Between groups	3.569	4	.892	1.641	.165
Within groups	120.209	221	.544		
Total	123.778	225			

Comments From Study Respondents

The questionnaire contained a comments section for respondents to freely express their opinions about the questionnaire or add any thoughts regarding the nature of justice and trust at their workplace. Twenty-six individuals took advantage of the opportunity to express their views. Several respondents indicated they work for an organization in which favoritism is practiced. The social exchange literature and leader-member exchange literature describe situations in which trusted employees are given preferential treatment and opportunities that are not offered to employees who are less trusted. The respondents providing these comments indicated a low level of trust in their relationships with their immediate supervisors and their organizations.

Fairness was also an issue to others. They indicated personally receiving fair treatment, but witnessed less than fair treatment of others by the same supervisor. Two indicated little contact with management but believe management is not trustworthy.

Several respondents indicated difficulty in responding to this study's questionnaire because they work for more than one supervisor. The questionnaire was geared toward a subordinate working under one supervisor. There may be others in this sample who had the same dilemma but did not indicate it.

Finally, several respondents indicated timing is important when completing the questionnaire in this study. They indicated that their current work situation was much improved from previous situations and their responses reflected the better working conditions. Several comments include:

"This was extremely difficult to respond to. I feel that my responses are honest. In this particular agency, favoritism among certain staff members is acutely present, however the entire staff strongly believes "the students come first.""

"Favoritism and workplace cliques are major problems. Favoritism by the administration and encouragement and participation within the clique by the administration. Morale is poor needless to say."

"If I had to fill this out 10 months ago – I would have responded totally differently. We have new management that has excellent leadership credentials."

"I had two different chains of command. One was pretty much always a "4" and the other a "2". Therefore the overall average is a "3.""

"Mixed management culture, i.e., government, civilian, and military decisions are not the same."

"My opinions differ between daily immediate supervisors versus higher management. I haven't had much interaction with higher management, but I don't feel they can be fully trusted."

"My supervisor is like no other person I have ever met. She is so friendly – and will do whatever she can on any situation. She has become a true friend. I wish some of my friends were as cool as her."

"I'm very pleased and happy in my present position. I would have answered differently a couple of years ago when I worked in an office where there was little trust in management."

" I am very close to my supervisor. I am treated very fairly and she forgives and forgets. But I have seen her make judgments about others and not be as willing to support/coach in same manner. This is because she trusts me and I've proven myself over several years (at different agencies – she brought me with her)."

"While I feel that my immediate supervisor treats me positive in all aspects, I have observed treatment of others that is not as supportive or fair."

"I believe management wants to be fair but when it comes to execution, self-interest and politics take over – so fairness is eliminated from the equation."

Chapter Summary

Previous research and Cronbach's alpha scores indicated that the six measures used in this study are reliable and appropriate for researching justice, trust, and RBSE. Statistically significant correlations between distributive justice, procedural justice, and interactional justice are consistent with the empirical research of the organizational justice literature. Additionally, the statistically significant relationships of procedural justice to trust in organization and interactional justice to trust in supervisor found in this study are also consistent with justice research. While hierarchical regression analysis confirms the statistically significant relationships among justice and trust, the analyses showed weak relationships between justice and RBSE and between trust and RBSE.

Path coefficients from path analyses were comparable to the regression coefficients. Weak relationships were found between justice and RBSE and between trust and RBSE, through

both direct and indirect paths. The path analysis statistics basically duplicated the regression analysis statistics and, consequently, were not worthy of additional pursuit. Results from One-Way ANOVAs indicated a statistically significant difference between a Master's degree and the other levels of education.

CHAPTER V
SUMMARY AND IMPLICATIONS

A number of factors are driving increasing expectations of employees in the workplace. Globalization and related technology bring a demand for work skills that reach across borders, continents, cultures, and legal systems. Concurrently, employee diversity in the workplace is growing as minorities and immigrants comprise a greater percentage of workers. Diversity requires a sophisticated set of interpersonal skills in order for individuals to work together efficiently. Alternative work designs such as self-directed work teams and teleworking are replacing the traditional hierarchical management system, requiring workers to become self-regulating and self-managing. Self-regulation implies the need for proactive behavior.

Crant (2000) describes four broad proactive behavior constructs—proactive personality, personal initiative, taking charge, and role-breadth self-efficacy (RBSE). Proactive personality and personal initiative are considered to be dispositional behaviors that are stable across varying situations. Taking charge and RBSE are considered to be context dependent behaviors that are subject to influence by external factors, an important distinction from proactive behavior that is dispositional.

RBSE was selected for investigation in this study because it can be enhanced by external factors. Even though taking charge can also be influenced by external factors, it was eliminated from consideration because it can be perceived as being an overly aggressive behavior, a negative connotation. The focus of RBSE is on what people *feel* they can do as opposed to what they *actually* do on the job. Proactive behavior, interpersonal skills, and interactive skills are central to RBSE (Parker 1998) because employees frequently need to communicate and integrate activities across departments.

Social Exchange Theory and the Norm of Reciprocity are utilized in describing potential relationships because of their association with the concepts of fairness, trust, and socialization. Organizational justice is often referred to as organizational *fairness*. Employee perceptions of three dimensions of organizational justice—distributive justice, procedural justice, and interactional justice—were examined in their relation to the trust and RBSE variables. Previous empirical research has shown a positive relationship between procedural justice and behavior by the organization, and a positive relationship between interactional justice and behavior by the

supervisor (Malatesta & Byrne, 1997). The relationship among justice, trust, and RBSE had not been investigated prior to this study.

Summary of Methods

The goal of this research was to investigate the relationship among organizational justice, trust, and RBSE. Various statistical analysis procedures were conducted using SPSS 11.0 for Windows and AMOS 4.0. An *a priori* path model (Figure 5.1) was generated that was consistent with the relationships among the justice and trust variables described in the empirical research (e.g., Cohen-Charash & Spector, 2001; Cropanzano & Prehar, 1999; Malatesta & Byrne, 1997; Masterson, et al., 2000; Moye, Bartol, & Masterson 1997; Schminke, Ambrose, & Cropanzano 2000).
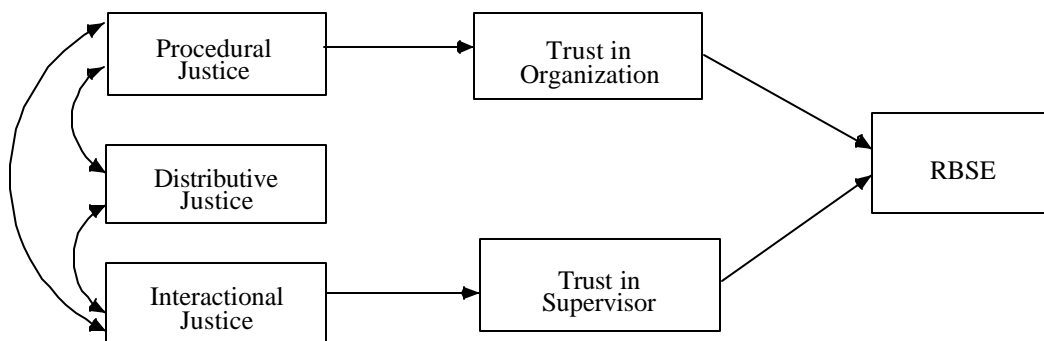

Figure 5.1. An *a priori* path analysis model of the relationship among organizational justice, trust, and RBSE.

Path models depict hypothesized relationships based upon sound theoretical research. Rectangular boxes contain observed variables, while straight lines with arrows from one variable to another identify direction of causal relationships and direct effects. Procedural justice in Figure 5.1 is hypothesized to have a direct effect on trust in organization. Trust in organization, in turn, is hypothesized to have a direct effect on RBSE. Figure 5.1 also hypothesizes that procedural justice has an indirect effect on RBSE through trust in organization. "Two-headed arrows hypothesize that a relationship exists, but their causal structure is not explicated by the model" (Klem, 1995, p.73).

The path model of Figure 5.1 consists of two paths. Figure 5.2 depicts one hypothesized path. Hypotheses associated with this path are listed following the graphic.

| Procedural Justice | → | Trust in Organization | → | RBSE |

Figure 5.2. Path one of the hypothesized relationships among procedural justice, trust in organization, and RBSE.

H_1: Procedural justice has a direct effect on trust in organization.

H_2: Trust in organization has a direct effect on RBSE.

H_3: Procedural justice has an indirect effect on RBSE through trust in organization.

Figure 5.3 illustrates the second path. The associated hypotheses follow the graphic.

| Interactional Justice | → | Trust in Supervisor | → | RBSE |

Figure 5.3. Path two of the hypothesized relationships among interactional justice, trust in supervisor, and RBSE.

H_4: Interactional justice has a direct effect on trust in supervisor.

H_5: Trust in supervisor has a direct effect on RBSE.

H_6: Interactional justice has an indirect effect on RBSE through trust in supervisor.

Data for this study came from questionnaire responses of white-collar professionals regarding their perceptions concerning organizational justice, trust, and RBSE. The questionnaire was composed of six measures employing a 37-item, Likert-type scale seeking the intensity of

agreement or disagreement with each item. Additionally, five questions were designed to elicit demographic data from the respondents. Following is a synopsis of the measures and demographic questions used in this study:

- Distributive Justice – six items of perceptions regarding fairness in distribution of rewards within one's organization
- Procedural Justice – six items of perceptions regarding fairness of procedures used in determining how rewards are distributed
- Interactional Justice – six items of perceptions regarding the manner in which one is treated by those who make and/or communicate decisions
- Trust in Organization – four items regarding perceptions of trust in one's organization
- Trust in Supervisor – five items regarding perceptions of trust in one's supervisor
- RBSE – ten items related to belief in one's ability to behave proactively and successfully perform interpersonal and integrative tasks if given the opportunity
- Demographic questions concerned gender, occupation, experience in current job, length of relationship with immediate supervisor, and level of education.

Reliability analysis (Cronbach's alpha) indicated that the six scales used in this study were reliable. Descriptive statistics, correlations, and hierarchical regressions were completed using SPSS. The hierarchical regressions were designed to test whether the trust variables mediated the relationship between justice and RBSE. One-Way ANOVAs were performed on demographic variables and RBSE. A path analysis using AMOS 4.0 was also conducted.

Summary of Findings

An *a priori* path model (Figure 5.1) based upon theoretical research was generated to depict relationships among organizational justice, trust, and RBSE. Two separate paths (Figures 5.2 and 5.3) were identified in the model and three hypotheses were developed for each path regarding the depicted relationships.

The first path (Figure 5.2) describes hypothesized relationships among procedural justice, trust in organization, and RBSE. Hierarchical regression analyses were performed to evaluate the hypothesis associated with the first direct relationship in the path —the effect of procedural

justice on trust in organization (H_1). Results of the hierarchical regression indicated that procedural justice does have a statistically significant relationship with trust in organization.

The next step involved a test of mediation to determine whether trust in organization mediates the relationship between procedural justice and RBSE. Several steps are required to test mediation—regression of the criterion variable (RBSE) on the predictor variable (procedural justice) and regression of the criterion variable on the predictor variable *and* the mediator variable. Thus, several hierarchical regressions were performed. The first involved investigation of the relationship between procedural justice and RBSE. A weak relationship was found. This was not totally unexpected because it was hypothesized that procedural justice's major effect would be channeled through trust in organization. The next hierarchical regression tested this hypothesis by regressing RBSE (criterion variable) on procedural justice (predictor variable) and trust in organization (mediator variable). Results of this regression indicated a weak relationship between trust in organization and RBSE. H_2 was therefore rejected. This relationship would need to be significantly stronger than the relationship between procedural justice and RBSE for the test of mediation to support the hypotheses. The relationship was actually weaker; therefore, H_3 was rejected.

The second path (Figure 5.3) describes hypothesized relationships among interactional justice, trust in supervisor, and RBSE. Hierarchical regression analyses were also performed to evaluate direct effects and mediated effects of the relationships among the variables in this path. Results of the hierarchical regression indicated that interactional justice does have a statistically significant relationship with trust in supervisor (H_4). This finding was anticipated because similar results were found in other empirical research.

A test of mediation was conducted by first regressing RBSE on interactional justice, then regressing RBSE on both interactional justice and trust in supervisor. Results indicated a weak relationship between trust in supervisor and RBSE. H_5 was therefore rejected. The mediating relationship of interactional justice on RBSE through trust in supervisor was also weak; H_6 was rejected.

A path analysis confirmed the results of the hierarchical regressions. Path coefficients were comparable to regression coefficients indicating support for a statistically significant relationship between procedural justice and trust in organization and a statistically significant

relationship between interactional justice and trust in supervisor. Small path coefficients indicated a weak relationship between procedural justice and RBSE and a weak relationship between trust in organization and RBSE. Similar weak relationships were found between interactional justice and trust in supervisor and trust in supervisor and RBSE.

One-Way ANOVAs of demographic variables and RBSE indicated that people with a Graduate degree had the highest level of RBSE in this study, followed by people with a Bachelor's degree, and then those with less than a college degree.

Implication of Findings

The statistically significant relationship between procedural justice and trust in organization was anticipated because similar results were found in other empirical research. The lack of a statistically significant mediation relationship between procedural justice, trust in organization, and RBSE, however, was not expected. The argument for investigating the relationship of these variables is that an individual operating under an organizational system of fairness in the procedures used in employee relations would yield a trusting relationship between employee and organization that would grow over time. An increase in trust between an individual and an organization would create an environment in which the individual would feel *safe* to pursue activities above and beyond normal job requirements. Surely some employees would act of their own volition, while others would act because of a feeling a responsibility for reciprocation to a benevolent organization. The important issue in this argument is the safe, trusting environment.

Bandura (1997) identifies three forms of environment—imposed, selected, and created— that are influential in an individual's direction of exercising personal agency (intentional action). The imposed environment provides limitations in terms of one's ability to exert control, but there is leeway in how one reacts to it. Bandura (1997) argues that environments are potential environments and only become actual environments once they are selected. In a selected environment, one has choices in the manner in which they behave, with some people taking advantage of opportunities while others do not. The created environment is an environment that individuals devise in order to exercise greater control over their lives. Entrepreneurs are most likely to be involved in created environments. Individuals in this study came from selected

environments in that they are employees of an organization in which the environment is already available.

Respondents expressed a relatively high level of procedural justice (Mean = 3.2), a high level of trust in their organization (Mean = 3.5), and a high level of RBSE (Mean 4.0). These results indicate that respondents in this study are operating in a safe, trustworthy environment. Unfortunately, this study failed to establish a statistically significant relationship among procedural justice and trust in organization with RBSE.

Lack of a statistically significant mediation relationship between interactional justice, trust in supervisor, and RBSE was even more of a surprise. The interaction between an employee and his/her supervisor is an important component in trust building. That was verified in this study by the finding of a statistically significant relationship between interactional justice and trust in supervisor. Supervisors typically provide favorable conditions and special opportunities to their most trusted employees (Dansereau, Graen, & Haga, 1975; Dienesch, & Liden, 1986). Trusted employees are given more tasks without interference (Bauer & Green, 1996), which demonstrates a high degree of trust in the employees by the supervisor. Most importantly, supervisors may introduce trusted individuals to leaders in other parts of the organization, thereby increasing the employees' social network, visibility, and ability to acquire information within the organization (Sparrowe & Liden, 1997). Trusted employees feel an obligation to reciprocate by performing activities above and beyond their normal work requirements (Settoon et al., 1996).

In this study, respondents indicated a high level of interactional justice (Mean = 3.9), a high level of trust in their immediate supervisor (Mean = 3.9), and a high level of RBSE (Mean = 4.0). The results indicate that respondents in this study have a strong, trustworthy relationship with their supervisor. Even though RBSE is high, this study failed to establish a statistically significant relationship among interactional justice and trust in supervisor with RBSE.

An important discovery in this study concerns the statistically significant relationship ($r = .27$, p <.01) between education and RBSE. Even though this does not indicate a particularly strong relationship, it does merit a closer look. Individuals with graduate degrees reported the highest level of RBSE, followed by those with Bachelor's degrees. Parker (1998) did not investigate the relationship between education and RBSE, but did find that supervisors,

managers, and white-collar professionals had the highest RBSE. Although she attributed the high RBSE to their broad, proactive integrative skills, it is quite possible that education was one underlying factor.

The respondents in this study were white-collar workers and most had an educational level beyond a high school degree. Parker (1998) studied a population composed of both blue-collar and white-collar workers. She found the white-collar group had a higher level of RBSE (supervisors/managers, Mean = 3.92; sales/marketing, Mean = 3.27) than the blue-collar group (clerical, Mean = 2.84; shopfloor employees, Mean = 2.44). Even though educational level is not identified, one can safely surmise that the overall educational level of the white-collar group was higher than the overall educational level of the blue-collar group. This study supports the notion that highly educated, white-collar employees have higher levels of RBSE than less educated white-or blue-collar employees.

There is evidence that highly educated, white-collar employees have higher levels of RBSE than less educated white-or blue-collar employees. However, it is possible that the high scores of this sample may actually be a ceiling effect. The RBSE mean for this sample was 4.0 and the median was 4.1. Eighty-two scores (36%) were 4.5 and above. Perhaps the RBSE measure used in this study is not appropriate for highly educated, white-collar professionals. These employees may frequently engage in the kind of activities measured by the RBSE instrument. I did not investigate that possibility in this study.

Workplace changes driven by globalization and technology bring increasing demands concerning higher skill levels required for employment opportunities (Naisbitt & Aburdene, 1990). The U.S. Department of Labor, Bureau of Labor Statistics (BLS) issues projections for the workforce every other year. BLS includes three alternative projections—high, medium, and low— based on potential growth of the U.S. economy. According to the projections for years 1990 – 2005, global competition and technology were restructuring occupational patterns toward jobs that were more likely to require higher levels of education [Kutscher, pp. 6-9, 1992].

Proactive behavior is an important element in an organization's success; organizations need proactive individuals. RBSE is one form of proactive behavior. Individuals in this study reported a high level of RBSE. The challenge for organizations is how to appropriately utilize people with RBSE in the workplace. That is the focus of the discussion below.

Recommendations for Practice

Respondents in this study reported a high level of RBSE (Mean = 4.03). However, one must be cautious when reviewing self-reported data because results tend to be somewhat inflated. The respondents were highly educated with 210 of 226 indicating completion of post-high school education. Highly educated people believe that they are capable of performing a variety of tasks if given the opportunity. Highly educated individuals bring a broad range of skills to the workplace. They believe they can complete many tasks if given the opportunity. Organizations that hire predominantly professional, white-collar employees should strive to utilize this talent pool to the full extent possible. Suggestions for accomplishing this follow.

Organizations should design a system for cataloging the knowledge and skills employees possess—a personal knowledge and skills inventory. (Some organizations are already involved in some form of knowledge management - capturing knowledge within their organizations. These organizations, as well as others, may already be engaged in the process of capturing employee skills). Each employee would be responsible for initiating the inventory. Supervisors, peers, and subordinates should also add their perspective of the individual to the inventory, to add balance and control inflation of self-reported data. The inventory should include five areas: a) knowledge of procedures, information sources, processes, etc.; b) technical skills – accounting, information technology, program analysis, etc.; c) interpersonal skills – writing, speaking, listening, presenting, etc.; d) personal skills – planning, organizing, problem solving, etc.; and e) X-Factors – attitude, dependability, desire, etc.

The inventory should be assessed through a face-to-face conference between the individual, immediate supervisor, and department/division manager. A critical portion of this conference should be devoted to an exploration of which particular skills are most relevant to the organization's long-range goals. Methods and time lines should be established for utilizing the relevant skills at an appropriate stage. A training/education plan should also be outlined at this time. Finally, performance expectations should be discussed and agreed upon by all parties.

A system such as this would be very difficult to establish in a hierarchical organization. The type of organization that would facilitate a system such as this is an organization that has clear goals and vision and alignment of individuals at all levels of the organization around these goals. Such an organization has an environment that is empowering, where people find good

opportunities for growth and where they are involved in developing and managing the organization. Additionally, there is an emphasis on performance, and employees are held accountable for results.

These recommendations may seem idealistic. I believe they can become a reality if organizations have the desire to make them a reality. In fact, numerous organizations have or had training departments that handled similar functions. A job position can be created in which the main duties consist of establishing an inventory of existing individual skills, reviewing future individual and organizational skill needs, and planning for closing the gap between the skills that exist and future skill needs. Other duties of this position can be relegated to various organizational training and career development functions.

Recommendations for Future Research

Although the data in this study did not support my path model, I still believe the model is viable. Two possible avenues of future research may prove this to be true. Development of a new RBSE measure that in some way intertwines RBSE activities and specific variables in the measure is one possible alternative to measure the strength of relationship between RBSE and other contextual variables. The RBSE measure in this study was more general in nature and did not include reference to the other variables of interest. A second alternative is the development of a separate measure of RBSE, specifically for white-collar professionals.

Parker (1998) found that some organizational variables are more important to enhancement of RBSE than others. For example, job enrichment enhanced RBSE while training did not. RBSE is an assessment of self-efficacy across a broad range of tasks, and training may not impact RBSE in instances where there is no opportunity to apply the skills gained from the training (Parker, 1998). Future research is needed to identify additional contextual variables that enhance RBSE.

Parker (1998) investigated enhancement of RBSE through various organizational practices. I investigated the influence of workplace environmental factors of justice and trust on RBSE. Identification of a population that already possesses RBSE was a key finding of this study. A next step would include research regarding methods for effective utilization of this population in the workplace.

Another important avenue of RBSE research concerns an identification of reasons people decide whether or not to engage in proactive behavior. In this study, participants indicated a high level of RBSE. Since RBSE is a belief by people of their capability, rather than actual performance, it is unknown how many actually follow through with action. A study addressing the relationship between RBSE and actual performance would be appropriate.

The occupation categories in this study were intentionally broad to preserve the identity of participants. This produced a large group of responses in the "other" category. No means were used to refine the meaning of other; therefore, analyses of these results were limited. Further investigation using more specific occupation categories might yield fruitful results.

Limitations

All of the data in this study were generated by single-source, self-report questionnaires. Common method variance is a concern with self-report measures. However, Spector (1987) indicates that well-validated instruments may alleviate some of the issues concerning common method variance. Parker (1998) noted that it is appropriate to assess self-efficacy with self-report measures because efficacy is a personal judgment. However, caution is still recommended because individuals tend to inflate their scores when responding to traits they deem to be desirable. The results of this study may only be generalized to a similar population of adults.

Conclusion

The path model for this study was generated following a careful review of related empirical research. The path model seemed feasible and consistent with the research. However, the data did not support the path model. Histograms indicated a possibility of skewness in the sample. Numerous data analysis processes including elimination of outliers, trimming the means, log 10 and square root transformations, and removal of highest RBSE scores had little or no effect on the final results.

One might conclude that results in which data do not support the hypotheses is of little value. I strongly disagree with that conclusion. Other researchers interested in the enhancement of RBSE can look to this study for potential ideas and strategies that may benefit their own research. They may consider investigating an avenue of research that is recommended, or they may find information that opens other research alternatives.

I hope my effort will inspire other doctoral students to press on when their data does not bear the fruit they anticipate. I found that "wrestling with the data" broadened and enhanced my learning experience. I was forced to learn more about my data, SPSS, and AMOS because of the need to know what went wrong. I delved into statistical procedures that would not have been necessary had my data supported my path model. The additional learning was well worth the experience.

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APPENDIX A

INSTRUMENT

General Information About the Questionnaire

Scholarly research is undertaken to provide individuals and organizations with factual evidence of best practices. This is often accomplished through use of questionnaires. This questionnaire is designed to investigate the relationship among organizational fairness, trust, and role breadth self-efficacy (RBSE) – a form of proactive behavior. Research indicates that proactive behavior is essential to organizational effectiveness. I am trying to determine if an individual's perception of organizational fairness and trust will enhance their willingness to engage in RBSE.

Completion of the questionnaire is voluntary; anonymity is guaranteed. No individual or organization will be identified. Responses will be aggregated and reported as group information.

Contents of the Questionnaire

1. Informed Consent – 2 pages. This requires your signature. Virginia Tech requires all doctoral candidates to supply this form to each and every respondent. Its purpose is to ensure that your response is voluntary and that you are informed of any risk involved in completing the questionnaire. There is no risk to you because you are guaranteed anonymity (Item V, page 1). The university requires that I collect and keep these with my questionnaire data.

2. Questionnaire – 3 pages. I am studying the relationship among organizational justice (fairness), trust, and role breadth self-efficacy.
   - Items 1-27 examine your perceptions of justice and trust.
   - Items 28-37 examine role breadth self-efficacy. Role breadth self-efficacy is concerned with what you *feel*, rather than what you *do*. You may or may not be engaging in activities described in items 28-37. The idea is to respond about how confident you feel about engaging in these activities if given the opportunity.

If you have any questions, comments, concerns, etc., please feel free to contact me:
- Gary J. Ruder, PhD candidate, Adult Learning and Human Resources Development, Virginia Tech
- Email: ruder@erols.com
- (703) 335-2664
- Address: 9911 Arrowood Drive, Manassas VA 20111-2597

Thank you very much for your participation!

Questionnaire

General Information

   This questionnaire is about organizational practices related to justice (sometimes referred to as fairness), trust, and proactive behavior in the workplace. Your perceptions regarding these practices are important because of your work experience within an organization.

   The survey will take approximately 15 minutes to complete. Instructions are listed for each part of the questionnaire. Please carefully read and honestly answer each and every question. Be assured that all your responses will be anonymous. The survey results will be reported only in the aggregate. You will never be individually identified. Participation in the survey is completely voluntary. Your response is important and greatly appreciated.

Part I. Instructions

The following statements concern the organization where you are employed. Please indicate how strongly you agree or disagree with each statement. Use the following scale:

Strongly Disagree (SD) = 1 2 3 4 5 = Strongly Agree (SA)

Circle the appropriate number for each statement.

	SD				SA
1. I am rewarded fairly considering the responsibilities I have.	1	2	3	4	5
2. I am rewarded fairly in view of the amount of experience I have.	1	2	3	4	5
3. I am rewarded fairly taking into account the amount of education and training I have.	1	2	3	4	5
4. I am rewarded fairly for the amount of effort I put forth.	1	2	3	4	5
5. I am rewarded fairly for the work I have done well.	1	2	3	4	5
6. I am rewarded fairly for the stresses and strains of my job.	1	2	3	4	5
7. My organization's procedures provide for collecting accurate information for making decisions.	1	2	3	4	5
8. My organization's procedures provide opportunities to appeal or challenge decisions.	1	2	3	4	5
9. My organization's procedures generate standards so that decisions can be made with consistency.	1	2	3	4	5
10. My organization's procedures are constructed in a manner to hear concerns of all affected by a decision.	1	2	3	4	5
11. My organization's procedures provide for useful feedback regarding a decision and its implementation.	1	2	3	4	5
12. My organization's procedures allow for requests for clarification or additional information about the decision.	1	2	3	4	5

	Strongly Disagree (SD) = 1 2 3 4 5 = Strongly Agree (SA)					
13.	My immediate supervisor considers my viewpoint.	1	2	3	4	5
14.	My immediate supervisor suppresses personal biases.	1	2	3	4	5
15.	My immediate supervisor provides me with timely feedback about decisions and their implications.	1	2	3	4	5
16.	My immediate supervisor treats me with kindness and consideration.	1	2	3	4	5
17.	My immediate supervisor shows concerns for my rights as an employee.	1	2	3	4	5
18.	My immediate supervisor takes steps to deal with me in a truthful manner.	1	2	3	4	5
19.	I feel free to discuss work problems with my immediate supervisor without fear of having it used against me later.	1	2	3	4	5
20.	I have complete trust that my supervisor will treat me fairly.	1	2	3	4	5
21.	If I make a mistake, my immediate supervisor is willing to "forgive" and "forget."	1	2	3	4	5
22.	My immediate supervisor is friendly and approachable.	1	2	3	4	5
23.	I can count on my immediate supervisor for help if I have difficulties with my job.	1	2	3	4	5
24.	Management has little regard for the well being of people who work for this organization.	1	2	3	4	5
25.	In my organization, management cannot be trusted.	1	2	3	4	5
26.	When management must make decisions that seem to be against the best interests of employees, I believe that management's decisions are justified by other considerations.	1	2	3	4	5
27.	Management seldom follows through with what they say they are going to do.	1	2	3	4	5

Please add any comments you wish about Part I.

_____

_____

_____

_____

_____

_____

Part II. Instructions

Statements 28-37 are designed to find out how confident you would feel if you were asked to carry out the task in each statement. Please circle the number that best indicates your level of confidence to carry out each task. Use the following scale:

Not at all Confident (NC) = 1   2   3   4   5 = Very Confident (VC)

How confident would you feel?	NC				VC
28. Analyzing a long-term problem to find a solution	1	2	3	4	5
29. Representing your work area in meetings with senior management	1	2	3	4	5
30. Designing new procedures for your work area	1	2	3	4	5
31. Making suggestions to management about ways to improve the working of your section	1	2	3	4	5
32. Contributing to discussions about the company's strategy	1	2	3	4	5
33. Writing a proposal to spend money in your work area	1	2	3	4	5
34. Helping to set targets/goals in your work area	1	2	3	4	5
35. Contacting people outside the company (e.g., suppliers, customers) to discuss problems	1	2	3	4	5
36. Presenting information to a group of colleagues	1	2	3	4	5
37. Visiting people from other departments to suggest doing things differently	1	2	3	4	5

PART III. Demographic Information   (*Please complete for descriptive purposes*)

38. Are you? ____Male ____Female

39. What is your current occupational type? (please mark only one):

____Administrative   ____Business Management   ____Computer Specialist   ____Engineering

____Human Resources   ____Information Technology   ____Program Management   ____Other

40. How long have you served in your current position? _____Yr(s) _____Mos.

41. How long have you served with your current immediate supervisor? _____Yr(s) _____Mos.

42. What is your highest educational level?   ___Some High School   ___ High School/GED ___ Some College

___ Bachelor's   ___ Master's   ___Doctoral

If you wish to make additional comments, please use the back of this sheet.

Thank you very much for completing this questionnaire!

Virginia Polytechnic Institute and State University
Informed Consent for Participants of Investigative Projects

Title of Project: <u>The Relationship Among Organizational Justice, Trust, and Role Breadth Self-efficacy</u>

Investigator: <u>Gary J. Ruder</u>

I. Purpose

The purpose of this study is to expand the research base of organizational justice, trust, and role breadth self-efficacy.

II. Procedures

Your role is to complete the questionnaire honestly. It should require approximately 15 minutes to complete.

III. Risk

There is no risk to you. The Extent of Anonymity (V. below) provides details about how the data will be processed and analyzed and how your anonymity will be protected.

IV. Benefits of this Project

There is no promise or guarantee of benefits to encourage you to participate. The research is strictly designed to add to the overall organizational research base.

V. Extent of Anonymity

- At no point will you report any information about yourself other than in the demographic section.
- All answers will be entered into a computer file with no identification. When all answers are entered, the original questionnaire will be destroyed.
- Analyses will be accomplished only at the aggregate level.
- No individual response from any individual will be analyzed or commented on.
- All reports will be grouped data.

VI. Compensation

There is no compensation for participation.

VII. Freedom to Withdraw

You may withdraw from this study at any time without penalty. You may withhold answering any particular question that you choose without penalty. You may receive a copy of the final report if you wish.

VIII. Approval of Research

This research has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University, by the <u>Department of Human Development</u>.

IX. Subject's Responsibilities

I voluntarily agree to participate in this study. I have the following responsibilities:
Complete the questionnaire honestly.

X. Subject's Permission

I have read and understand the Informed Consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent for participation in this project.

If I participate, I may withdraw at any time without penalty. I agree to abide by the rules of this project.

_____

Signature   Date

Should I have any questions about this research or its conduct, I may contact:

Gary J. Ruder_____   (703) 335-2664
        Investigator   Phone

Dr. Albert K. Wiswell_____   (703) 538- 8475
        Faculty Advisor   Phone

H. T. Hurd_____   (540) 231-5281
        Chair, IRB   Phone
        Research Division

APPENDIX B

SEMINAR FLYER

Working More Effectively With the Deaf & Hard-of-Hearing

A Seminar for Supervisors & Coworkers

About This Seminar

Hearing loss is a disability that is poorly understood. It is an invisible condition that is more greatly impacted by attitudinal barriers than physical barriers, mainly due to lack of understanding. Few people bother to interact significantly with severely hard-of-hearing or deaf employees. Greater participation in the work environment by the deaf and hard-of-hearing can occur only through increased communication and knowledge about hearing loss by the people with whom they work.

What You Will Learn

- Hearing loss - general information
- Tips to assist employees who lipread
- Writing techniques & tips to save time
- Other communication tips (one-to-one, in meetings, and through an interpreter)
- Hearing loss - issues and answers

Some Organizations Sending Participants to Gary Ruder's Workshops

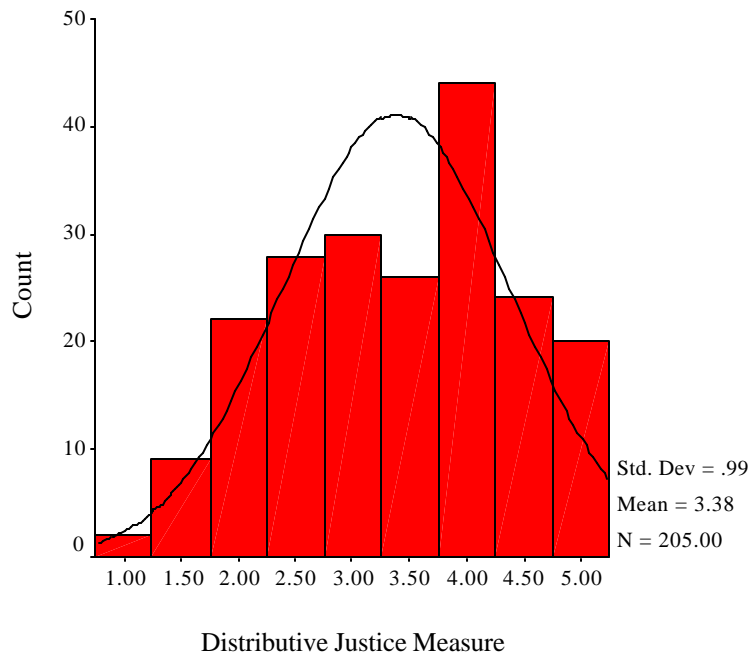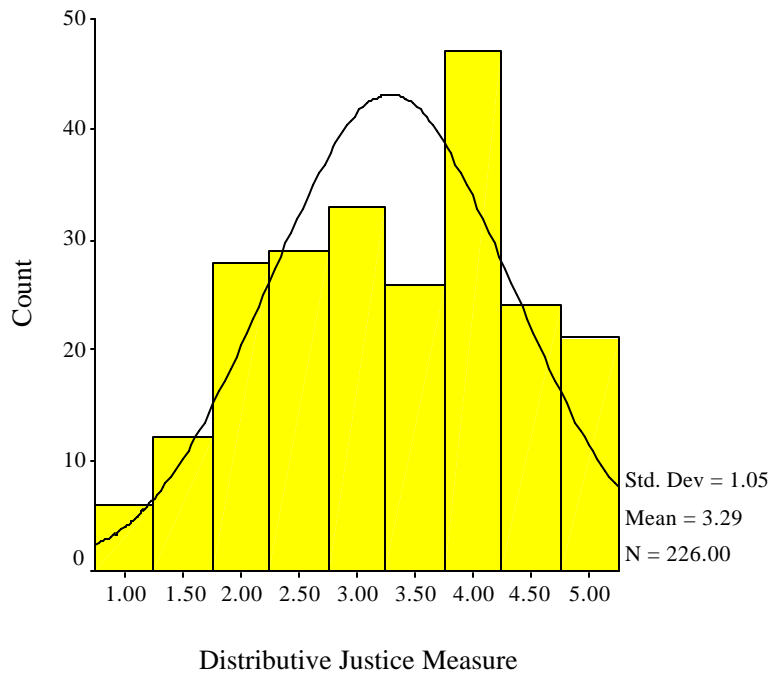|		
U.S. Army Corps of Engineers	Social Security Administration	Internal Revenue Service
Allied Signal Aerospace Company	U.S. Geological Survey	Environmental Protection Agency
AT&T Bell Labs	Central Intelligence Agency	Tektronix, Inc.
The Boeing Company	Veterans Administration	Department of the Treasury
Bonneville Power Administration	U.S. Air Force	National Security Agency
U.S. Navy	U.S. Army	Dept. of Health and Human Services
U.S. Forest Service	U.S. Postal Service	Federal Highway Administration
Bureau of Land Management	U.S. Office of Personnel Management	Department of Agriculture

Instructor

Gary J. Ruder of the Washington, DC metro area is the workshop instructor. He has over twenty years' experience working with the deaf and hard-of-hearing and is fluent with sign language. He holds a BA degree in Teaching the Deaf & Hard-of Hearing and an MS degree in Vocational-Technical Education. He served as teacher, coach, career counselor and vocational director at state schools for the deaf in Colorado and Montana.
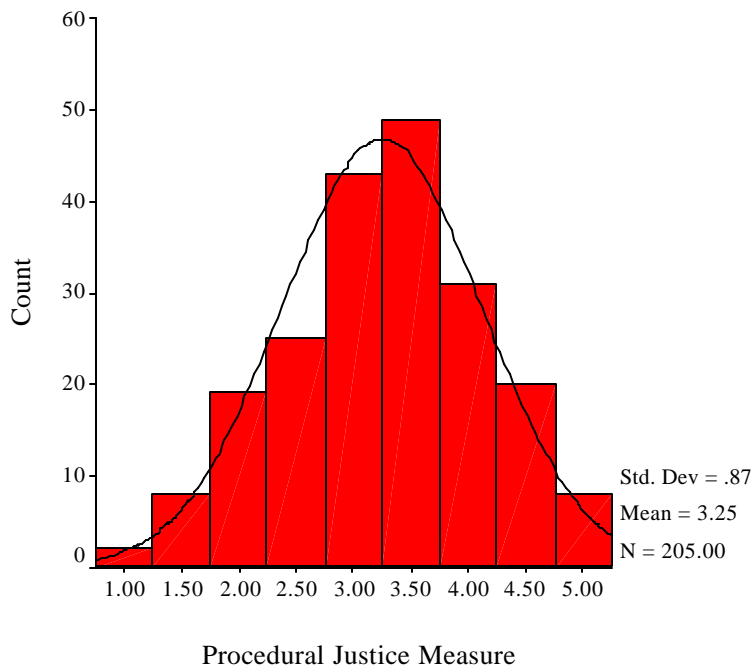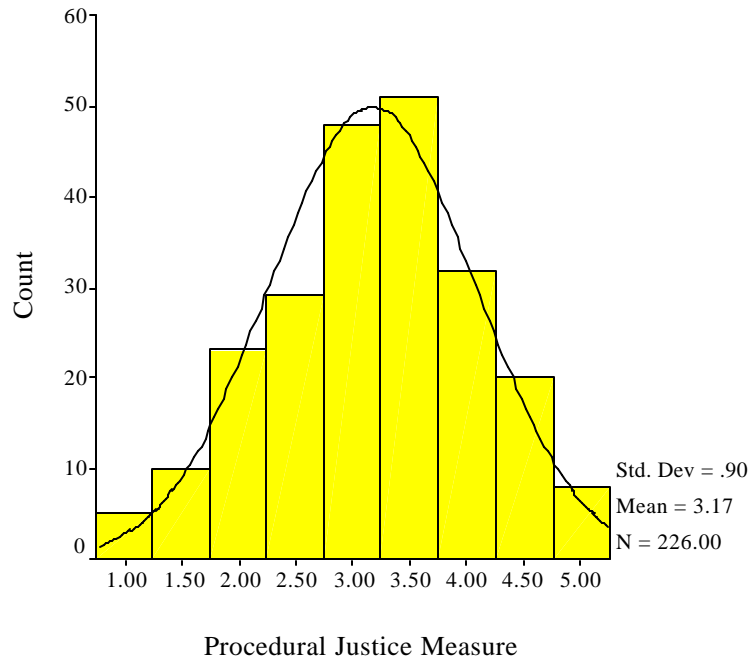
He is a national presenter of a variety of workshops on topics related to work performance issues of the deaf and hard-of-hearing. He has conducted hundreds of workshops since 1985 for thousands of hearing impaired employees and their supervisors and coworkers throughout the United States. These training sessions have offered firsthand experience about needs encountered by deaf and hard-of-hearing employees.
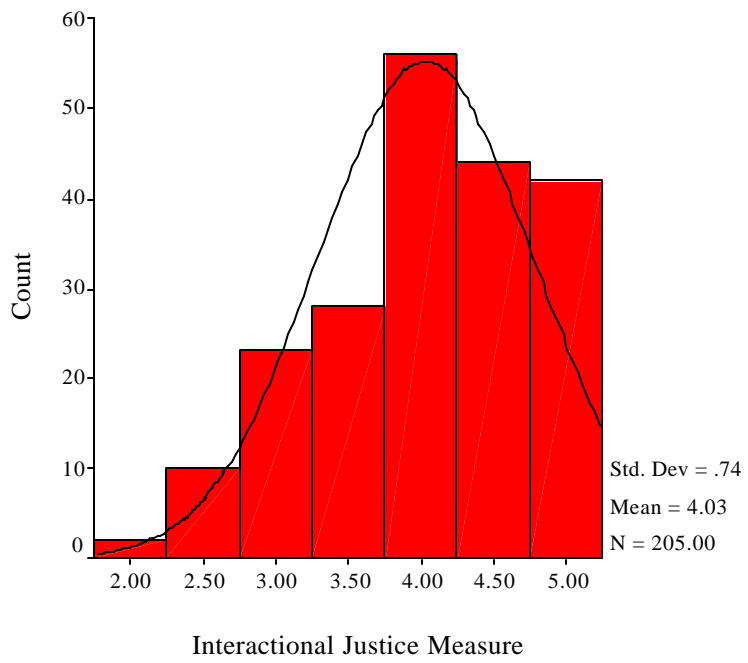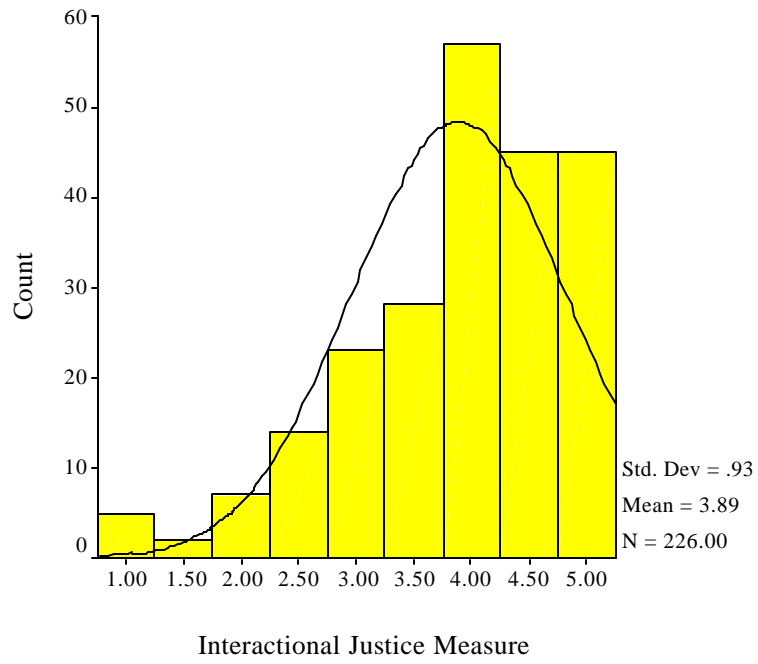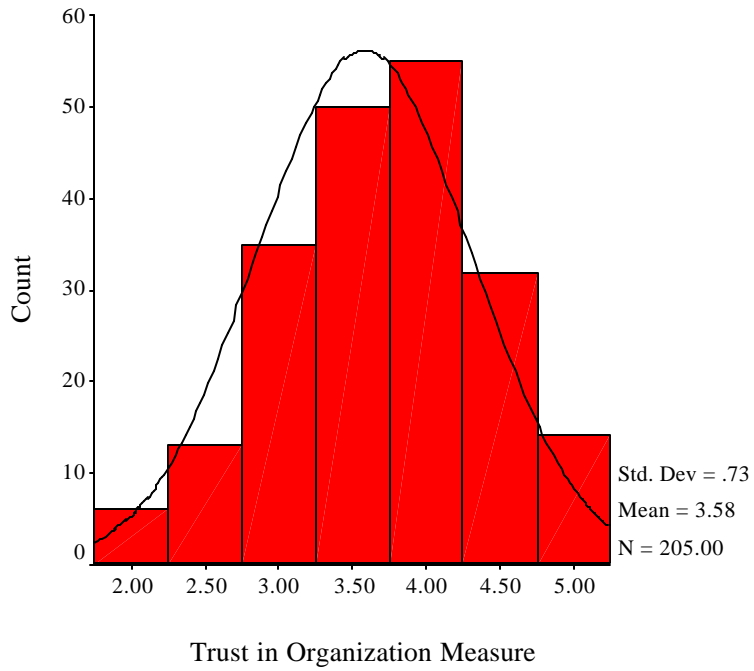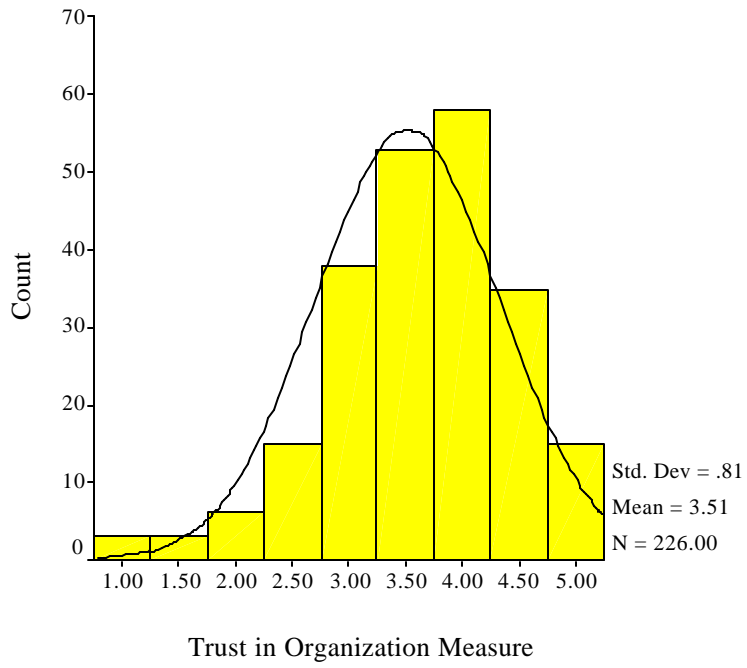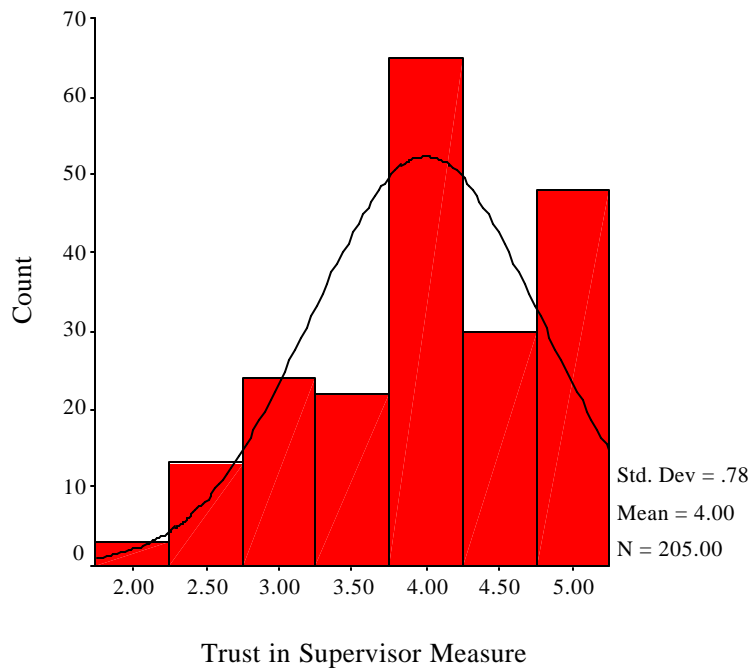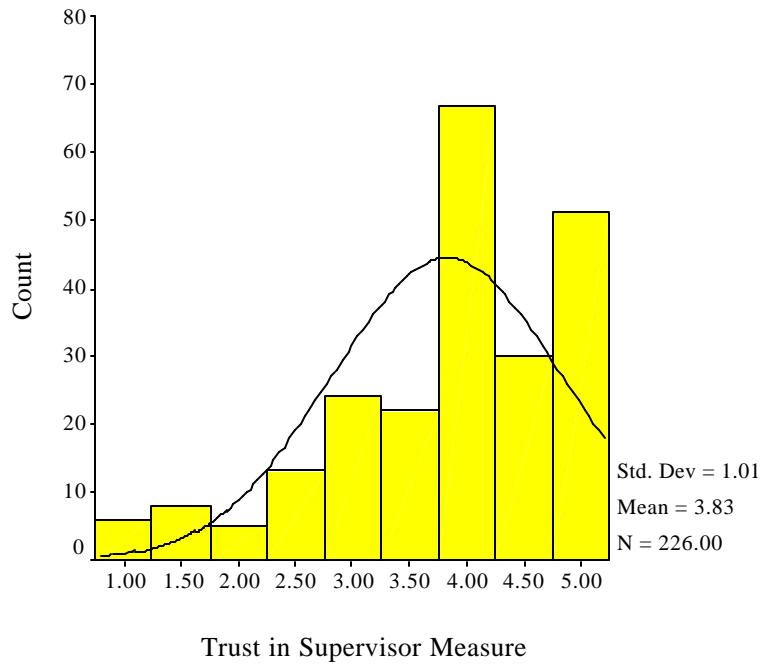
Workshop Date:
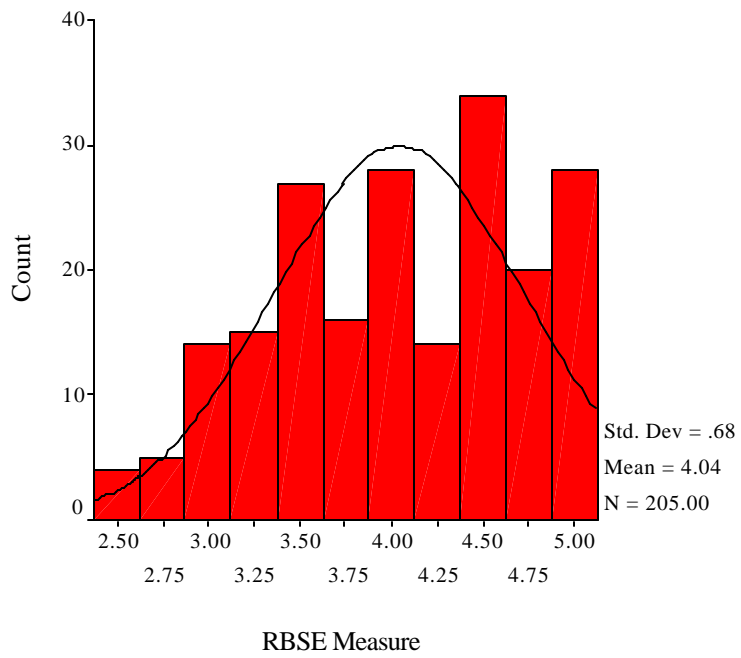**Workshop Time:**

APPENDIX C

HISTOGRAM S AND SCATTERPLOTS

Distributive Justice Measure

Std. Dev = 1.05
Mean = 3.29
N = 226.00

Distributive Justice Measure

Std. Dev = .99
Mean = 3.38
N = 205.00

Std. Dev = .90
Mean = 3.17
N = 226.00

Procedural Justice Measure

Std. Dev = .87
Mean = 3.25
N = 205.00

Procedural Justice Measure

Interactional Justice Measure

Std. Dev = .93
Mean = 3.89
N = 226.00

.

Interactional Justice Measure

Std. Dev = .74
Mean = 4.03
N = 205.00

Std. Dev = .81
Mean = 3.51
N = 226.00

Trust in Organization Measure

Std. Dev = .73
Mean = 3.58
N = 205.00

Trust in Organization Measure

Trust in Supervisor Measure

Std. Dev = 1.01
Mean = 3.83
N = 226.00

Trust in Supervisor Measure

Std. Dev = .78
Mean = 4.00
N = 205.00

Std. Dev = .74
Mean = 4.03
N = 226.00

RBSE Measure

Std. Dev = .68
Mean = 4.04
N = 205.00

RBSE Measure

APPENDIX D

DATA TRANSFORMATIONS

Table D1

Illustrative Table of Descriptive Statistics Analyses Including Means, Standard Deviations, Correlations, Following a Logarithm Data Transformation

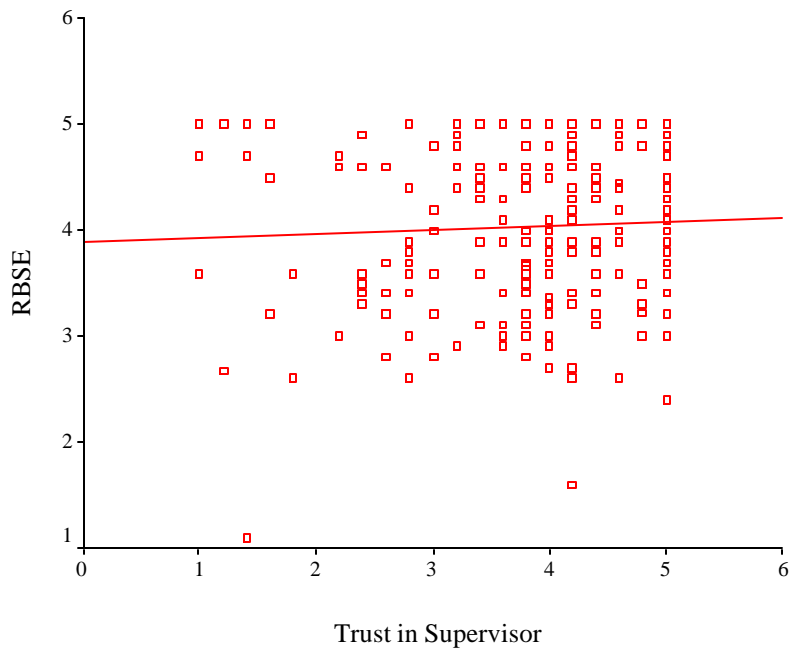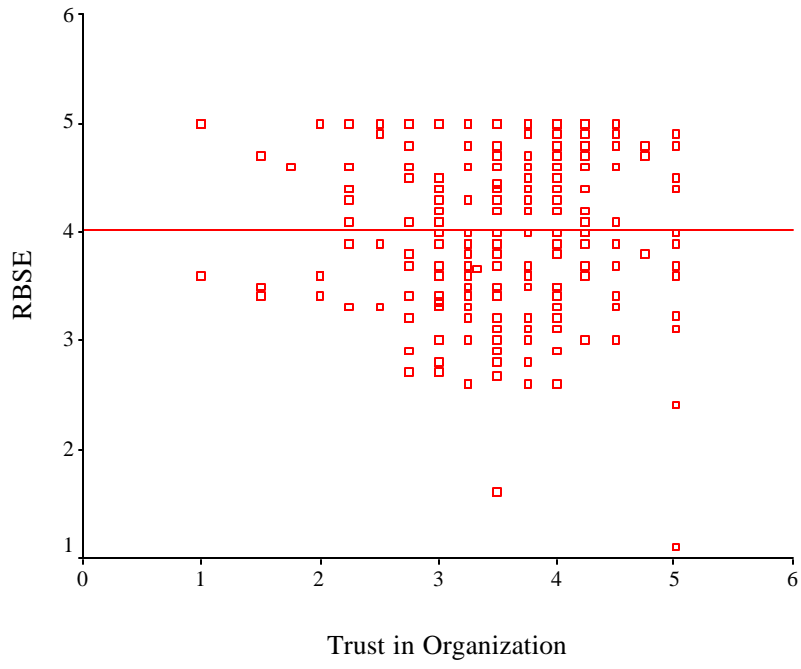|	Variable	M	SD	1	2	3	4	5	6
7.	Distributive Justice	3.3	1.05		.50**	.45**	.31**	.44**	-.013
8.	Procedural Justice	3.2	.90			.38**	.51**	.33**	.103
9.	Interactional Justice	3.9	.93				.22**	.91**	.096
10.	Trust in Organization	3.5	.81					.18**	-.024
11.	Trust in Supervisor	3.8	1.01						.086
12.	RBSELOG	.60	.09						

Std. Dev = .19
Mean = 2.00
N = 226.00

RBSESQRT

APPENDIX E

HIERARCHICAL REGRESSION ANALYSES

Hypothesized Path 1

Figure E1 illustrates the hypothesized relationship among procedural justice, trust in organization, and RBSE. This relationship is described by the following 3 hypotheses:

H_1: Procedural justice has a direct effect on trust in organization.

H_2: Trust in organization has a direct effect on RBSE.

H_3: Trust in organization acts as a mediating variable between procedural justice and RBSE.

Figure E1. Hypothesized relationship among procedural justice, trust in organization, and RBSE.

Three hierarchical regression analyses were conducted to test the hypothesized relationships of path 1 and to determine whether trust in organization mediates the relationship between procedural justice and RBSE. "A given variable functions as a mediator to the extent that it accounts for the relation between the predictor and the criterion" (Baron & Kenny, 1986, p. 1,176). "To establish mediation, the following conditions must hold: a) the predictor variable(s) must affect the mediator in regression 1; b) the predictor variable(s) must affect the criterion variable in regression 2; and c) the mediator variable must affect the criterion variable in regression 3. In addition, the predictor variable (procedural justice) must account for less than or no variance when the mediator variable (trust in organization) is in the regression model" (Baron & Kenny 1986 p. 1,177).

Baron and Kenny (1986) developed a 3-step procedure for testing the significance of mediator variables. The first analysis involves regression of the mediator variable on the predictor variable (Baron & Kenny, 1986). Table E1 provides the results of this regression. In step 1, distributive justice was entered as the control variable and trust in organization was entered as the mediator variable. In step two, procedural justice was entered as the predictor variable. Procedural justice shows a statistically significant relationship with trust in organization. As stated, H_1 was supported from the correlation.

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Table E1

Coefficients for the Relationship of Procedural Justice to Trust in Organization

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	SE B	ß	t	Sig.
Step 1					
Distributive Justice	.241	.049	.311	4.892	.000
Step 2					
Distributive Justice	5.836E-02	.052	.075	1.130	.260
Procedural Justice	.422	.060	.468	7.034	.000

Note. $R^2 = .097$ for Step 1; $?R^2 = .164$ for Step 2 ($p < .0005$).

The second analysis regressed the criterion variable on the predictor variable (Baron & Kenny, 1986). In step 1, distributive justice was entered as the control variable and RBSE was entered as the criterion variable. In step 2, procedural justice was entered as the predictor variable. Table E2 shows that procedural justice has a statistically significant relationship with RBSE.

Table E2

Coefficients for the Relationship of Procedural Justice to RBSE

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	SE B	ß	t	Sig.
Step 1					
Distributive Justice	-1.500E-02	.047	-.021	-.317	.752
Step 2					
Distributive Justice	-7.264E-02	.054	-.102	-1.336	.183
Procedural Justice	.133	.063	.162	2.110	.036

Note. $R^2 = .000$ for Step 1; $?R^2 = .020$ for Step 2 ($p < .036$).

The final analysis involved regressing the criterion variable on the predictor variable (*and* the mediator variable (Baron & Kenny, 1986). In the first step, distributive justice was entered as the control variable and RBSE was entered as the criterion variable. In step 2, procedural justice was entered. Trust in organization was entered in step 3. Results in Table E3 show that the relationship between trust in organization and RBSE is not statistically significant; therefore, again, H2 was not supported from the correlations. Also, procedural justice accounts for more variance (.020) than trust in organization (.003) in the regression. Accordingly, the test of mediation does not hold. Trust in organization does not mediate the relationship between procedural justice and RBSE. H_3 is not supported.

Table E3

Coefficients for the Relationships of Procedural Justice, Trust in Organization, and RBSE.

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	SE B	ß	t	Sig.
Step 1					
Distributive Justice	-1.500E-02	.047	-.021	-.317	.752
Step 2					
Distributive Justice	-7.264E-02	.054	-.102	-1.336	.183
Procedural Justice	.133	.063	.162	2.110	.036
Step 3					
Distributive Justice	-6.903E-02	.055	-.097	1.266	.207
Procedural Justice	.159	.070	.193	2.281	.023
Trust in Organization	-6.187E-02	.071	-.068	-.877	.381

Note. R^2 = .000 for Step 1; $?R^2$ = .020 for Step 2; $?R^2$ = .003 for Step 3.

Hypothesized Path2

The second path (Figure E2) illustrates hypothesized relationships of interactional justice, trust in supervisor, and RBSE. The hypotheses associated with this path are:

H_4: Interactional justice has a direct effect on trust in supervisor.

H_5: Trust in supervisor has a direct effect on RBSE.

H_6: Trust in supervisor acts as a mediating variable between interactional justice and RBSE.

Figure E2. Hypothesized relationship among interactional justice, trust in supervisor, and RBSE.

Three hierarchical regression analyses were also conducted to test the hypothesized relationships of path 2 and to determine whether trust in supervisor mediates the relationship between interactional justice and RBSE. In step 1, distributive justice was entered as the control variable and trust in supervisor was entered as the mediator variable. In step two, interactional justice was entered as the predictor variable. Table E4 provides the results of this hierarchical regression. Interactional justice shows a statistically significant relationship with trust in supervisor. H_4 is supported: interactional justice has a direct effect on trust in supervisor.

Table E4

Coefficients for the Relationship of Interactional Justice to Trust in Supervisor

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	SE B	ß	t	Sig.
Step 1					
Distributive Justice	.426	.058	.440	7.339	.000
Step 2					
Distributive Justice	4.090-02	.031	.042	1.338	.182
Interactional Justice	.964	.034	.887	28.051	.000

Note. $R^2 = .194$ for Step 1; $?R^2 = .628$ for Step 2 ($p < .0005$).

In the second analysis, distributive justice was entered as the control variable and RBSE was entered as the criterion variable in step 1. Interactional justice was entered in step 2 as the predictor variable. Table E5 shows there is no statistically significant relationship between interactional justice and RBSE.

Table E5

Coefficients for the Relationship of Interactional Justice to RBSE

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	SE B	ß	t	Sig.
Step 1					
Distributive Justice	-1.500E-02	.047	-.021	-.317	.752
Step 2					
Distributive Justice	-4.664E-02	.053	-.066	-.882	.379
Interactional Justice	7.929E-02	.059	.099	1.333	.184

Note. $R^2 = .000$ for Step 1; $?R^2 = .008$ for Step 2.

In the third and final analysis of path 2, distributive justice was entered as the control variable and RBSE was entered as the criterion variable in the first step. In step 2, interactional justice was entered. Trust in supervisor was entered in step 3. Results in Table E6 indicate that the relationship between trust in supervisor and RBSE is not statistically significant; therefore, H_5 is not supported. Also, interactional justice accounts for more variance (.008) than trust in supervisor (.001) in the regression. Accordingly, the test of mediation does not hold. Trust in supervisor does not mediate the relationship between interactional justice and RBSE. H_6 is not supported.
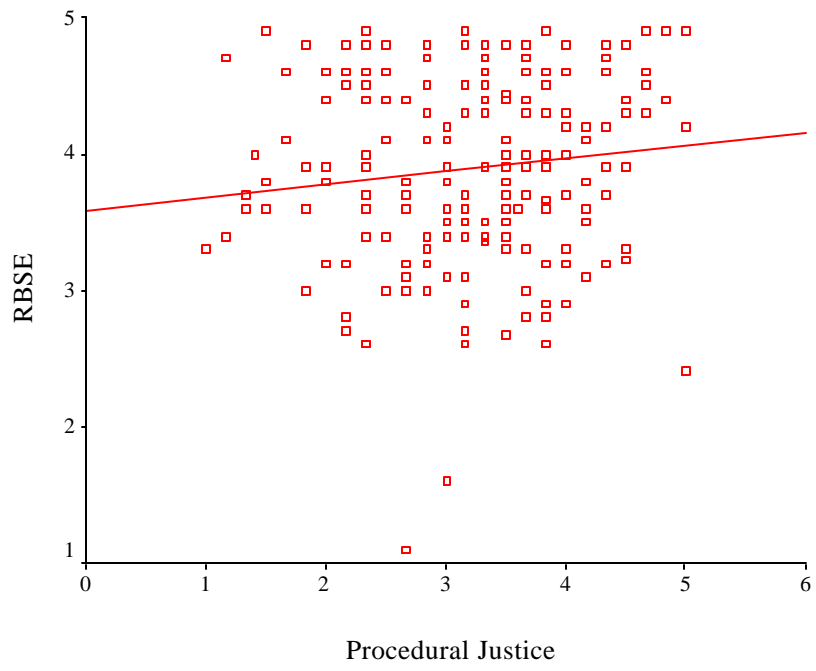
Table E6

Coefficients for the Relationship of Interactional Justice, Trust in Supervisor, and RBSE

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	SE B	ß	t	Sig.
Step 1					
Distributive Justice	-1.500E-02	.047	-.021	-.317	.752
Step 2					
Distributive Justice	-4.664EE-02	.053	-.066	-882	.379
Interactional Justice	7.929E-02	.059	.099	1.333	.184
Step 3					
Distributive Justice	-4.498E-02	.053	-.063	-.845	.399
Interactional Justice	.119	.127	.149	.934	.351
Trust in Supervisor	-4.070E-02	.116	-.055	-.350	.726

Note. R^2 = .000 for Step 1; $?R^2$ = .008 for Step 2; $?R^2$ = .001 for Step 3.
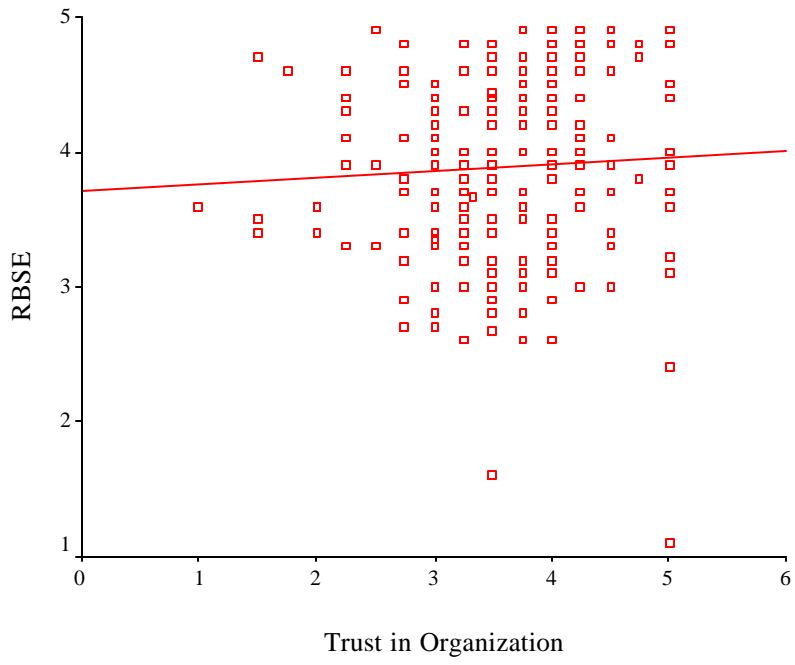
APPENDIX F

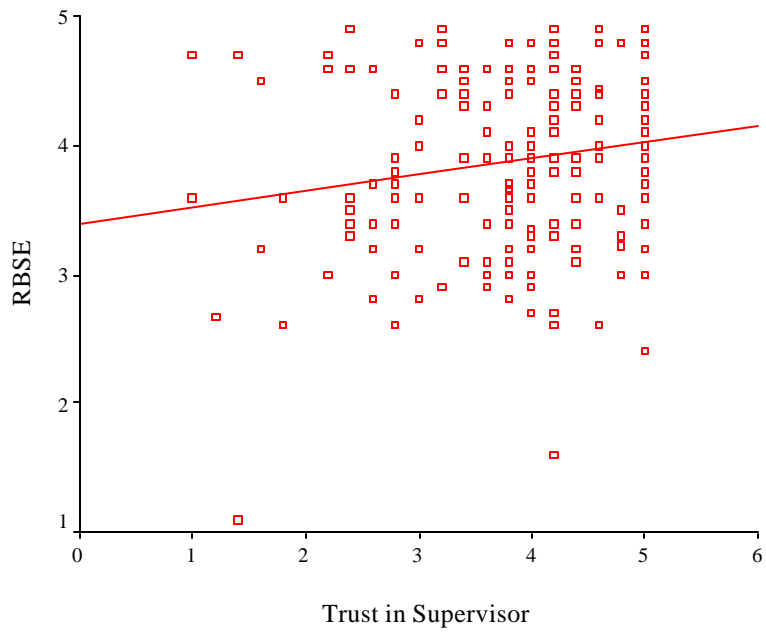## SCATTERPLOTS WITH 5.0 RBSE REMOVED

N = 197 responses.

N = 197 responses

N = 197 responses

N = 197 responses

APPENDIX G

EFFECT SIZE

Table G1

Effect Size Statistics for Predictor, Criterion, and Gender Variables

	Eta	Eta Squared
Procedural justice & Gender	.038	.001
Interactional justice & Gender	.091	.008
Trust in organization & Gender	.057	.003
Trust in supervisor & Gender	.036	.001
RBSE & Gender	.084	.007

Table G2

Effect Size Statistics for Predictor, Criterion, and Occupation Variables

	R	R Squared	Eta	Eta Squared
Procedural justice & Occupation	-.047	.002	.104	.011
Interactional justice & Occupation	-.090	.008	.133	.018
Trust in organization & Occupation	-.082	.007	.092	.009
Trust in supervisor & Occupation	-.109	.012	.120	.014
RBSE & Occupation	-.163	.027	.234	.055

Table G3

Effect Size Statistics for Predictor, Criterion, and Education Variables

	R	R Squared	Eta	Eta Squared
Procedural justice & Education	-.004	.000	.046	.002
Interactional justice & Education	-.167	.028	.176	.031
Trust in organization & Education	.032	.001	.056	.003
Trust in supervisor & Education	-.229	.052	.249	.062
RBSE & Education	.304	.092	.305	.093

Table G4

Effect Size Statistics for Predictor, Criterion, and Experience in Current Job Variables

	R	R Squared	Eta	Eta Squared
Procedural justice & Experience	-.019	.000	.077	.006
Interactional justice & Experience	.062	.004	.148	.022
Trust in organization & Experience	-.108	.012	.110	.012
Trust in supervisor & Experience	.001	.000	.106	.011
RBSE & Experience	.092	.009	.093	.009

Table G5

Effect Size Statistics for Predictor, Criterion, and Length of Relationship With Immediate Supervisor Variables

	R	R Squared	Eta	Eta Squared
Procedural justice & Length of Relationship	.038	.001	.153	.023
Interactional justice & Length of Relationship	-.003	.000	.180	.032
Trust in organization & Length of Relationship	-.036	.001	.130	.017
Trust in supervisor & Length of Relationship	-.003	.000	.125	.016
RBSE & Length of Relationship	.084	.007	.170	.029

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