A MULTILEVEL EXAMINATION OF PROACTIVE WORK BEHAVIORS: CONTEXTUAL AND INDIVIDUAL DIFFERENCES AS ANTECEDENTS

by

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A DISSERTATION

Presented to the Faculty of

The Graduate College at the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Doctor of Philosophy

Major: Human Sciences (Leadership Studies)

Under the Supervision of Professor John E. Barbuto Jr.

Lincoln, Nebraska

May, 2011

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University of Nebraska, 2011

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In this study, the process through which individual differences (i.e., proactive personality, psychological empowerment, and servant leader characteristics at level-1) and contextual differences (i.e., servant leadership characteristics at level-2) are antecedents to proactive work behaviors (i.e., problem prevention, individual innovation, voice, and taking charge) was explored. Results indicated that psychological empowerment partially mediated the relationship between proactive personality and individual innovation. Psychological empowerment fully mediated the relationship between proactive personality and taking charge. Proactive personality was indirectly related to problem prevention, via psychological empowerment. Psychological empowerment was directly related to voice. In addition, servant leader characteristics at level-1 were positively related to psychological empowerment and each of the four proactive work behaviors. Psychological empowerment partially mediated the relationship between servant leader characteristics at level-1, problem prevention, and taking charge. It fully mediated the relationship between servant leader characteristics at level-1 and individual innovation. Servant leader characteristics at level-1 were indirectly related to voice, via psychological empowerment. Relationships were not found between

servant leader characteristics at level-2, and psychological empowerment, or proactive work behaviors.

Table of Contents

List of Figures

List of Tables

CHAPTER I

Introduction

Practitioners and scholars have advocated the importance of viewing individuals as active agents, who are able to engage in proactive work behaviors that facilitate positive changes in themselves and their work environment (Ashford & Cummings, 1985; Bateman & Crant, 1993; Covey, 1989; Crant, 2000; Grant & Ashford, 2008). Individuals are not merely passive puppets of their work environment; rather they can make conscious decisions to succeed in adverse and uncertain conditions (Bandura, 1997; Cameron, Dutton, & Quinn, 2003; Cameron & Lavine, 2006; Seligman & Csikszentmihalyi, 2000). Proactive work behaviors are those self-initiated, change oriented, and future-directed behaviors that facilitate positive change within the internal organization (Parker & Collins, 2010).

Proactive work behaviors are vital during times of uncertainty, change, and increasing interdependence (Griffin, Neal, & Parker, 2007; Kotter, 1985). As organizations continue to face uncertainty, through increasing development in technology, changing economic challenges, and a move to a global economy; the proactive work behaviors of their employees are becoming more essential. Proactive work behaviors are positively related to individual job satisfaction (Ashford & Black, 1996) and individual job performance (Grant, Parker, & Collins, 2009; Griffin, Parker, & Mason, 2010; Van Dyne & LePine, 1998). These positive consequences of proactive work behavior illustrate the potential impact that proactive work behaviors may have

within the workplace context. Thus, a greater understanding of the antecedents of proactive work behaviors is warranted.

Researchers have proposed that both individual differences and contextual factors are antecedents to proactive work behaviors (Crant, 2000; Parker, Bindl, & Strauss, 2010). To date, scholars have largely emphasized individual differences as antecedents to proactive work behavior (Ashford & Black, 1996; Morrison & Phelps, 1999; Parker, 2000; Grant & Ashford, 2008). For example, desire for control (Ashford & Black, 1996), proactive personality (Parker & Collins, 2010), general self-efficacy and felt responsibility (Morrison & Phelps, 1999) have all been reported as antecedents to proactive work behaviors. Scholars have also proposed that cognitive motivational states may explain the process by which individual differences influence proactive work behaviors (Parker, Williams, & Turner, 2006). One positive motivational state that has not been examined as a possible mediating variable is psychological empowerment.

Scholars have also examined contextual differences as possible antecedents to proactive work behaviors. Work environment variables such as job autonomy, co-worker trust (Parker, Williams, & Turner, 2006), and leader vision (Griffin, Parker, & Mason, 2010), have all been reported as contextual antecedents to proactive work behaviors. Researchers have not yet considered leadership style as an antecedent to proactive work behaviors. However, some scholars are proposing that a positive leadership style, known as servant leadership, may be a plausible antecedent to positive behaviors such as proactive work behaviors (Liden, Wayne, Zhao, & Henderson, 2008; Luthans, 2002a; Searle & Barbuto, 2011; Van Dierendonck, 2011).

Proactive Work Behavior

Proactive work behaviors have largely been examined as discrete forms of behavior. For example, researchers have examined employees' feedback seeking behavior (Ashford & Cummings, 1985), proactive socialization tactics (Ashford & Black, 1996), helping behavior, ability to voice constructive improvements to standard procedures (Van Dyne & LePine, 1998), taking charge (Morrison & Phelps, 1999), proactive idea implementation, proactive problem solving (Parker, Williams, & Turner, 2006), rational-issue selling (Grant, Parker, & Collins, 2009), and proactive performance (Griffin, Parker, & Mason, 2010). Recently, scholars proposed that 11 separate proactive work behaviors combine to form three second-order factors of proactive behavior: proactive work behaviors (behaviors focused on improving the internal organization), proactive strategic behaviors (behaviors aimed at helping the organization fit into its surrounding environment), and proactive environmental organization fit behaviors (behavior aimed at helping the individual fit into the organizational environment) (Parker & Collins, 2010). This study will focus on the second-order factor of proactive work behaviors.

Parker and Collins (2010) reported that the second-order factor of proactive work behaviors included four dimensions: problem prevention, individual innovation, voice, and taking charge. Problem prevention occurs when employees seek to discover the root cause of problems, and implement procedures to prevent future reoccurrence of the problem (Frese & Fay, 2001; Parker & Collins, 2010). Individual innovation occurs when an employee recognizes new and emerging opportunities, generates new ideas, and works to implement those ideas (Scott & Bruce, 1994; Parker & Collins, 2010). The proactive

behavior of voice occurs when employees express constructive challenges to improve the standard procedures of their work environment (Van Dyne & LePine, 1998; Parker & Collins, 2010). Finally, taking charge occurs when employees seek to improve the way work is executed (i.e., work structures, practice, and routines) (Morrison & Phelps, 1999; Parker & Collins, 2010). The focus of each of these four dimensions is to stimulate positive changes in the internal organization (Parker & Collins, 2010). For this current study, proactive work behaviors were conceptualized as a four factor correlation model. This allowed for examination of the antecedents of each of the four dimensions.

Psychological Empowerment

Psychological empowerment is an increase in task motivation, and has received considerable attention by both practitioners and scholars (Conger & Kanungo, 1988). Both have recognized the many positive consequences that are related to employees' psychological empowerment. For example, researchers have reported that psychological empowerment is positively related to innovation (Pieterse, Knippenberg, Chippers, & Stam, 2010; Spreitzer, 1995; Spreitzer, de Janasz, & Quinn, 1999), satisfaction (Castro, Villegas Perinan, & Bueno, 2008; Seibert, Silver, & Randoph, 2004; Spreitzer, Kizilos, & Nason, 1997), and manager and follower effectiveness (Spreitzer, Kizilos, & Nason, 1997). Psychological empowerment has been conceptualized as a motivational construct that "reflects an active, rather than a passive, orientation to a work role" (Spreitzer, 1995, p. 1444). Employees that have this active orientation desire to shape their work role and context (Spreitzer, 1995; 1996), and feel an increase in task motivation (Thomas & Velthouse, 1990), which may increase the likelihood of them engaging in proactive work behaviors.

Researchers have also reported that work context and organizational context are antecedents to psychological empowerment (Seibert, Silver, & Randoph, 2004; Spreitzer, 1996). Transformational leadership and transactional leadership have been found to be related to psychological empowerment (Avolio, Zhu, & Koh, 2004; Castro, Villegas Perinan, & Bueno, 2008). A more follower-oriented leadership style, such as servant leadership, may be better suited to facilitate the development of psychological empowerment in individuals. In addition, psychological empowerment may help explain the process by which proactive personality is positively related to proactive work behaviors. Scholars have called for additional cognitive motivational states to be examined as possible antecedents to proactive work behaviors (Crant, 2000; Grant & Ashford, 2008; Parker, Bindl, & Strauss, 2010; Parker, Williams, & Turner, 2006).

Servant Leadership

Servant leadership is a positive form of leadership that is centered on the development and long-term growth of followers (Ehrhart, 2004; Smith, Montagno, & Kuzmenko, 2004). A central tenet of servant leadership is the ability of servant leaders to help their followers become more independent, autonomous, and capable of governing their own behavior (Greenleaf, 1977; Liden, Wayne, Zhao, & Henderson, 2008). Servant leaders recognize the human potential in their followers, and the possibilities of facilitating positive deviance (Searle & Barbuto, 2011; Smith, Montagno, & Kuzmenko, 2004; Van Dierendonck, 2011). Thus, it seems likely that servant leadership characteristics will be positively related to followers' positive behaviors.

Psychological empowerment and proactive work behaviors are positive behaviors that depict an individual who is autonomous, active, and independent (Grant, Parker, &

Collins, 2009; Luthans, Youssef, & Avolio, 2007). Therefore, it seems likely that a servant leader will be able to facilitate these behaviors in their followers. Currently, there are no known research studies that have empirically examined servant leadership as an antecedent to psychological empowerment and proactive work behaviors.

This investigation into the contextual and individual antecedents of proactive work behaviors required a multilevel model approach. A brief primer on multilevel modeling is needed to fully understand the cross-level model that was examined (see Figure 1). The next section will review: the multilevel nature of organizational research, the macro and micro divide in organizational research, how contextual factors may lead to interdependence of group members, and finally, why a multilevel model is needed when studying leadership. This will be done by discussing the average leadership style verse individualized leadership, and the between-leader and within-leader variation.

The Multilevel Nature of Organizational Research

Denise Rousseau (1985) stated, "as the field of organizational behavior develops and establishes itself as a social science, it is inevitable that researchers advocate a multilevel approach to the study of organizations" (p. 2). This emphasis on properly accounting for the multilevel nature of organizations continues to be a central focus of many well-known organizational scholars (Dansereau, Alutto, & Yammarino, 1984; Dansereau & Yammarino, 1998a; Klein, Dansereau, & Hall, 1994; Schriesheim, Castro, Zhou, & Yammarino, 2001; Yammarino & Dansereau, 2008; Yammarino, Dionne, Chun, & Dansereau, 2005). It is anticipated that this multilevel approach will continue to increase in relevance and prominence over the next several decades. In 2001, Bernard Bass attempted to project future trends in organizational science over the next thirty four

years. He remarked that "testing for level of analysis will become a routine part of scientific inquiry in the organizational sciences" (Bass, 2002, p. 381). Taken together, it seems that, "the issue of level is of paramount importance in the field of organizational behavior" (Rousseau, 1985, p. 2). Why is a multilevel approach of paramount importance for organizational scholars?

Micro and Macro Phenomenon

Organizational science is an interdisciplinary field of study. Researchers within the field of organizational science have largely descended from either parent field of sociology or psychology. This has led to a divide within the field of organizational behavior as psychology uses a micro approach and sociology uses a macro approach to the study of behavior (House, Rousseau, & Thomas-Hunt, 1995; Rousseau, 1985). Historically, sociologists have focused on examining groups, organizations, and societies. A sociological macro approach emphasizes the context, and relies on the assumption that once the context is understood, human behavior can be more easily managed (Klein & Kozlowski, 2000).

In contrast, psychologists, using a micro approach, tend to examine individual differences. They rely on the assumption that the individual is motivated beyond merely contextual factors (House, Rousseau, & Thomas-Hunt, 1995). Psychologists tend to largely discredit the contextual situation, and assume that once the individual is understood, behavior can then be managed (Klein & Kozlowski, 2000). Psychologists see the world as individual people and focus on people as individuals, rather than groups of people. Scholars from each of these fields have brought either their micro or macro perspective to the study of organizations (House, Rousseau, & Thomas-Hunt, 1995).

To further illustrate this dichotomy, one group of scholars highlighted the micro and macro emphasis which the top organizational science journals have taken (House, Rousseau, & Thomas-Hunt, 1995). These authors illustrated that some journals take a micro approach (i.e., *Journal of Applied Psychology* and *Organizational Behavior and Human Decision Processes*) by primarily publishing perspectives that focus on individual differences, and some take a macro approach (i.e., *Administrative Science Quarterly* and *The Academy of Management Review*) as they publish articles that focus on group and organizational phenomenon.

A second illustration of this micro and macro divide is with the emerging positive organizational behavior (POB) (Luthans, 2002a) and positive organizational scholarship (POS) (Cameron, Dutton, & Quinn, 2003) streams of research. A few scholars are attempting to position POB as a micro phenomenon, while attempting to position POS as a macro approach focused primarily on the organizational level (Luthans & Avolio, 2009; Luthans, Youssef, & Avolio, 2007).

To overcome this micro and macro divide, scholars have proposed taking a multilevel approach by using meso models that encompass both micro and macro approaches (House, Rousseau, & Thomas-Hunt, 1995; Kozlowski & Klein, 2000). This multilevel approach allows for behavior to be viewed, "as a combined result of contextual and individual-difference effects (Kozlowski & Klein, 2000, p. 9). This allows researchers to take into consideration individual differences, and contextual differences as antecedents to a predetermined dependent variable.

By taking a multilevel approach, researchers can avoid making both ecological and atomistic fallacies. Ecological fallacies occur when sociologists take results from

aggregated data and assume that these findings will occur at the individual level (Kozlowski & Klein, 2000). Researchers make an atomistic fallacy when they take findings reported from the individual level, and assume they will also occur at the group or organizational level (Kozlowski & Klein, 2000). To overcome the tendency to commit either ecological or atomistic fallacies, scholars have recommended the need to take a multilevel approach that can account for variance attributed to individuals, and variance attributed to the context (i.e., group).

Contextual Factors and Interdependence

Organizational researchers have recognized that "any single data point is, in all likelihood, partially influenced by contextual factors—individual employee behavior is affected by work group membership" (Bliese & Hanges, 2004, p. 400). This means that popular concepts, such as leadership, "cannot be understood by studying any single unit or level of analysis" (House, Rousseau, & Thomas-Hunt, 1995, p. 74). Leadership scholars have been vocal in advocating the necessity of using a multilevel approach when examining leaders and their direct reports (Dansereau, Alutto, & Yammarino, 1984; Dansereau & Yammarino, 1998a; Dansereau & Yammarino, 1998b; Yammarino & Dansereau, 2008). This multilevel approach is essential because of the interdependence between a leader and their direct reports. Yammarino and Dansereau (2008) stated:

> "When a person leads or follows, the leader and the follower inevitably become interdependent with each other in some way. As a consequence, leaders and followers move from the situation in which each party is considered as an individual to a higher level of analysis where they form at least a dyad or where the leader links with the followers as a group" (p. 136).

The direct reports, or individuals being led by a particular leader, have all been exposed to similar stimuli - the behaviors, style, and characteristics of that leader (Hofmann & Gavin, 1998). This makes the direct reports more similar to each other than individuals being lead by a different leader (Bliese, 2000; Bliese & Hanges, 2004), and allows them to be classified as a work group. Scholars have defined a group as "a collection of individuals who are interdependent and interact on a face-to-face or virtual basis with one another. Formal work groups or teams generally consist of a leader and his/her immediate direct reports (Yammarino, Dionne, Chun, & Dansereau, 2005, p. 881). For this study, "groups" were defined as direct reports who report to a common supervisor (Liden, Wayne, Zhao, & Henderson, 2008). Being classified as a group means direct reports are considered nested within leaders (Dansereau, Alutto, & Yammarino, 1984; Bliese & Hanges, 2004).

A multilevel approach is necessary because of the interdependence associated with belonging to the same group. This interdependence violates the non-independence assumptions of ordinary least squares regression, and allows them to be considered as a group (Raudenbush & Bryk, 2002; Snijders & Bosker, 1999). This interdependence is best modeled with a multilevel approach where both individual differences (i.e., level-1) and leader behaviors/characteristics (i.e., level-2) can be taken into account by incorporating additional error terms (Bliese & Hanges, 2004). Interestingly, scholars have found that only 9% of the journal articles in top leadership journals have taken an appropriate approach to the multilevel dilemma inherent in leadership research (Yammarino & Dansereau, 2008; Yammarino, Dionne, Chun, & Dansereau, 2005).

Average Leadership Style Verse Individualized Leadership

A multilevel perspective is also needed because of the varying impact leaders may have on their direct reports. Leaders can portray both *average* and *individualized* leadership characteristics and behaviors. First, leaders sometimes portray an average leadership style (ALS), or the tendency to exhibit similar characteristics or behaviors to all of their direct reports (Rousseau, 1985; Yammarino & Dansereau, 2008). These are the level-2 leader characteristics. In order, for this to occur there must be a general consensus from the direct reports that the leader is displaying a particular style of leadership or behavior (Bliese, 2000). ALS originates from the assumption that group constructs can emerge from the shared properties of group members (Kozlowski & Klein, 2000; Snijders & Bosker, 1999).

Group constructs that are based on the shared properties of members, originate from the individuals in the group and are the homogenous attitudes or perceptions of group members (Klein & Kozlowski, 2000). Examples include organizational climate (Rousseau, 1985), team efficacy (Klein & Kozlowski, 2000), and servant leadership at the group level (Ehrhart, 2004; Walumbwa, Hartnell, & Oke, 2010). This group level construct is measured by taking the individual perceptions of each of the direct reports and examining the degree of consensus. If consensus occurs, the individual level can be aggregated to the group level by taking the group mean (Bliese, 2000; Kozlowski & Klein, 2000). Hypothesizing servant leadership as a group variable means the supervisor displays servant leader characteristics in a similar and consistent manner to all of their direct reports.

Group constructs can also originate from the global properties of the group. Global properties of groups are the objective, observable, and descriptive characteristics of the group (Klein & Kozlowski, 2000). Global properties originate from the group, rather than individual members of the group like shared properties do. Whenever researchers study latent variables at the group level, they cannot use the global properties of groups to measure their latent variables. Global properties of groups are observable. Latent variables cannot be seen, therefore, they must examine group variables via the shared properties of the group. By taking the mean of each group, researchers are able to aggregate individual data to the group level. Each group member will have the same score. Scores will differ across groups, but not within groups. In summary, when researchers study a latent group variable, they conceptualize the latent group variable as a product of the shared properties of the group, rather than the global properties of the group (Snijders & Bosker, 1999). ALS of leaders stems from the shared properties of a group.

Second, Yammarino and Dansereau (2008) also highlighted individualized leadership (IL) or the one-to-one impact leaders have on their direct reports. IL focuses on how the individual perceives their supervisor, regardless of how others in the group perceive them (Yammarino & Dansereau, 2008). This is considered the individual (i.e., level-1) impact that leaders have on individuals. This is measured by asking direct reports their perception of their supervisor. It is considered the within-leader variation examined in multilevel modeling. This emphasizes how the individual perceives their leader, regardless of how others in the group perceive the leader.

Between-leader and Within-leader Variation

This study seeks to examine both between-leader and within-leader variation of servant leaders. Within-leader variation will be examined by looking at servant leadership at the individual level, or the extent to which an individual perceives their leader portraying servant leadership characteristics to them individually. This is the one-to-one relationship or the individualized leadership (Yammarino & Dansereau, 2008). Servant leadership at the individual level will be used as a predictor of both psychological empowerment and proactive work behaviors. It is hypothesized that the more an individual perceives their leader having servant leader characteristics, the higher their psychological empowerment and proactive work behaviors will be.

Between-leader variation will be examined by measuring the shared consensus of group members on their leader's servant leadership characteristics, or the tendency of supervisors to exhibit servant leader characteristics to all of their direct reports (Rousseau, 1985; Yammarino & Dansereau, 2008). This is the average leadership style of the supervisor. If there is group consensus on their leader's servant leadership characteristics then this will be aggregated to the group level (Bliese, 2000). This is the group variable that will be examined in this study. Servant leadership at the group level will be examined to see if it can predict psychological empowerment and proactive work behaviors above that of the individual level of servant leadership. In essence, will coming from a group where there is consensus among direct reports that their leader exhibits servant leadership characteristics predict psychological empowerment and proactive work behaviors beyond that of the individual level.

Scholars have advocated the necessity of considering the multilevel context of organizations in theory/conceptual model, measurement, analysis and inference of the data (Yammarino, Dionne, Chun, & Dansereau, 2005). Rather than simply addressing the multilevel issue in the statistical analyses, this study seeks to recognize the multilevel issue explicitly by conceptualizing a model that is multilevel in nature (see Figure 1). This study seeks to take into consideration both micro (i.e., individual differences), and macro (i.e., contextual differences) in predicting proactive work behaviors.

Proposed Cross-level Model

The proposed model (see Figure 1) will examine proactive work behaviors at the individual level. Proactive work behavior at the group/team or organizational levels will not be examined. Psychological empowerment is proposed as a cognitive motivational antecedent to each of the four proactive work behaviors. Scholars have reported that role breadth self-efficacy and flexible role orientation are cognitive motivational states that are positively related to proactive work behaviors (Parker, Williams, & Turner, 2006). However, scholars have not examined the impact of psychological empowerment on proactive work behaviors. In addition, previous research has shown a positive relationship between proactive personality and proactive work behaviors (Parker & Collins, 2010). This study seeks to expand the research by examining the process by which this relationship occurs. Specifically, it is proposed that psychological empowerment will act as a cognitive motivation state that will mediate the relationship between proactive personality and each of the four proactive work behaviors. The mediating impact of psychological empowerment has not been considered in previous research.

In this model, servant leader characteristics (i.e., at level-1 and level-2) are proposed as antecedents to both psychological empowerment and the four proactive work behaviors. This model proposes servant leader characteristics at level-1 will be positively related to employees' psychological empowerment and each of the four proactive work behaviors. It is anticipated that servant leader characteristics at level-2 will explain additional variance above and beyond that of servant leader characteristics at level-1. Scholars have not examined servant leader characteristics at level-2, nor their potential cross-level impact on employees' psychological empowerment or proactive work behaviors. Scholars have also not considered the incremental effect of servant leader characteristics on employees' behavior.

Finally, psychological empowerment is proposed as a mediator of both servant leader characteristics at level-1 and level-2. Research shows that servant leader characteristics generally have an impact on positive outcomes by creating some type of positive cognitive motivational state (Ehrhart, 2004; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Searle & Barbuto, 2011; Walumbwa, Hartnell, & Oke, 2010). This conceptual model proposes that the relationship between servant leader characteristics at both levels, and proactive work behaviors at level-1, will be mediated by psychological empowerment. In summary, the hypothesized model proposes that individual differences and contextual differences will be related to the proactive work behaviors by way of psychological empowerment.

Research Questions

This research study is designed to answer six primary questions. They are as follows:

1. At the individual level, is psychological empowerment an antecedent to proactive work behaviors?
2. At the individual level, does psychological empowerment mediate the relationship between proactive personality and proactive work behaviors?
3. At the individual level, are servant leader characteristics positively related to individual level employee psychological empowerment and proactive work behaviors?
4. At the individual level, does psychological empowerment mediate the relationship between servant leader characteristics and proactive work behaviors?
5. At the group level, do servant leader characteristics have an incremental effect beyond the individual level of servant leadership characteristics on employee psychological empowerment and proactive work behaviors?
6. Will psychological empowerment mediate the relationship between servant leadership characteristics and proactive work behaviors at both the individual and group levels?

Significance of the Study

This research study had several purposes which explain the significance of this research endeavor. First, this study attempted to clarify some of the antecedents of proactive work behaviors. This was accomplished by examining both individual differences and contextual antecedents of proactive work behaviors simultaneously.

Specifically, the positive relationship between proactive personality and the four proactive work behaviors was explored. Psychological empowerment was proposed as a plausible antecedent. In addition, there is a strong need for the examination of contextual antecedents of positive work behaviors. Thus, the study of one positive form of leadership, such as servant leadership, seems timely and relevant (Liden, Wayne, Zhao, & Henderson, 2008; Searle & Barbuto, 2011; Van Dierendonck, 2011). This study examined servant leadership as a possible contextual antecedent to each of the four proactive work behaviors.

Second, this study was a multilevel empirical study, which adds to the limited number of multilevel empirical examinations of servant leadership. Researchers have begun to empirically evaluate servant leadership (Barbuto & Wheeler, 2006; Ehrhart, 2004; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Walumbwa, Hartnell, & Oke, 2010); however, only recently has there been recognition of the need for a multilevel examination of servant leadership (Liden, Wayne, Zhao, & Henderson, 2008; Van Dierendonck, 2011). Having a multilevel orientation allows researchers to properly analyze data that has followers nested within leaders.

Third, this study examined a cross-level model of servant leadership. The few existing multilevel examinations of servant leadership have either studied servant leadership only at the individual (Liden, Wayne, Zhao, & Henderson, 2008) or only at the group level (Ehrhart, 2004; Walumbwa, Hartnell, & Oke, 2010). One study examined servant leadership characteristics at both the individual and group levels simultaneously; however, with only 17 leaders, this endeavor did not have the necessary power to test the hypotheses (Liden, Wayne, Zhao, & Henderson, 2008). Researchers have yet to establish

if there is an incremental effect of servant leader characteristics at the group level. Does belonging to a work group that displays higher levels of servant leadership characteristics have an influence on individual level outcomes above and beyond that of the individual level servant leadership characteristics? This study examined that possibility.

Fourth, this study examined one of the foundational tenets of servant leadership, which is the idea that servant leaders are able to help their followers become more autonomous (Avolio, Walumbwa, & Weber, 2009; Greenleaf, 1977; Van Dierendonck, 2011). The dependent variables chosen for this study are timely, relevant, and important, but also demonstrate a core similarity of autonomy, which illustrates this central tenet of servant leadership.

Finally, this study offers timely contributions to the literature on servant leadership and positive behavior, which are currently flourishing. It attempts to bridge these two important and popular streams of research. Scholars have only recently recognized the compatibility of servant leadership and positive behaviors (Liden, Wayne, Zhao, & Henderson, 2008; Searle & Barbuto, 2011; Van Dierendonck, 2011).

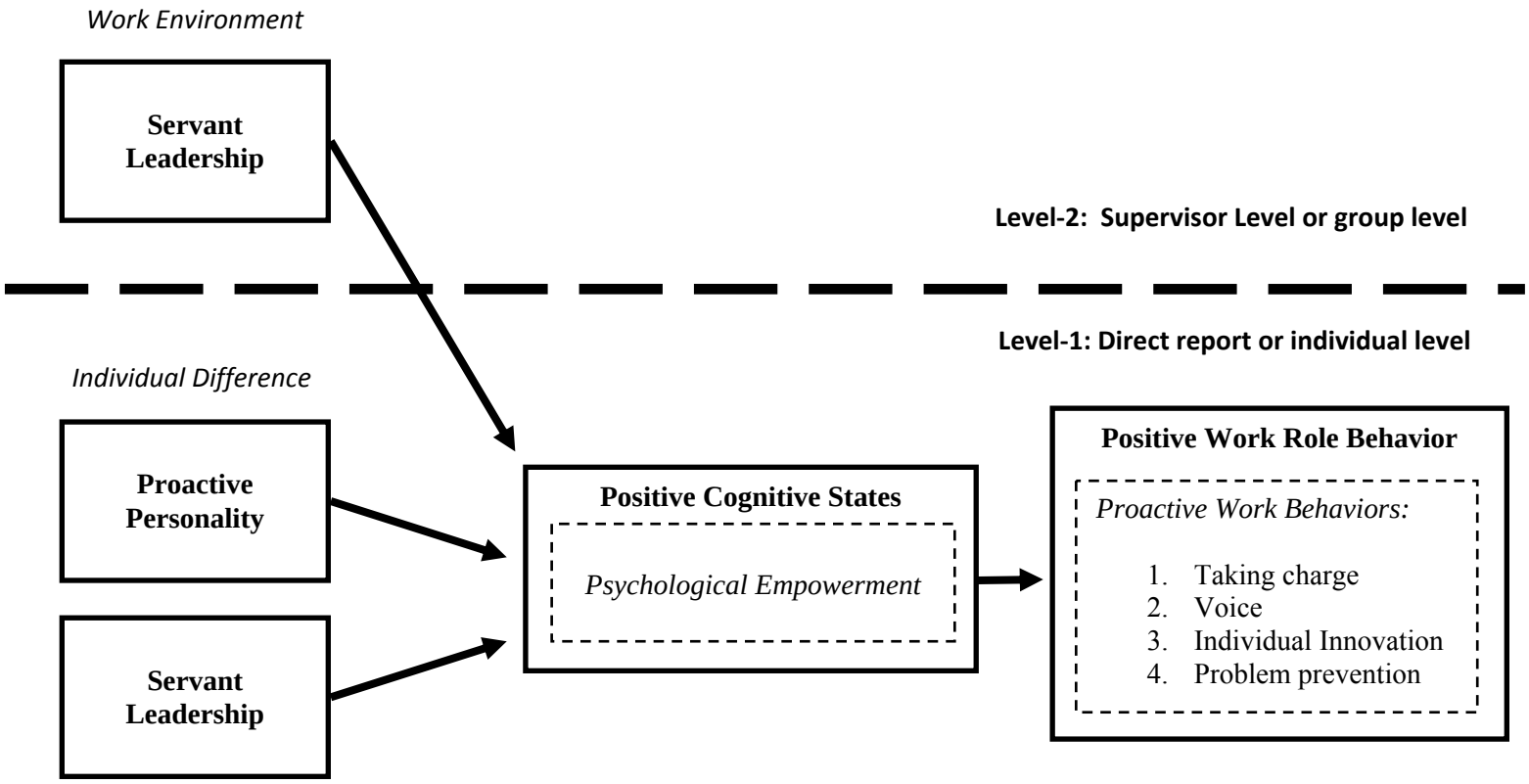

Figure 1: Multilevel conceptual model showing individual differences and contextual differences as antecedents.

CHAPTER II

Review of Literature

This chapter reviews the literature on proactive work behaviors, proactive personality, psychological empowerment, and servant leadership. First, the literature on proactive work behaviors is reviewed. This review includes examining the different proactive behaviors that have been investigated, and the recent higher order factor of proactive work behavior (Parker & Collins, 2010). It is this higher order factor of proactive work behavior that was the basis for this particular study.

Second, the individual trait of proactive personality is reviewed as a possible antecedent to proactive work behaviors. One replication hypothesis is proposed, which replicates an already reported relationship between proactive personality and proactive work behaviors. Proactive personality is also hypothesized as an antecedent to psychological empowerment.

Third, the literature on psychological empowerment is reviewed. Hypotheses are proposed that link psychological empowerment to each of the proactive work behaviors, and also as a mediator of the relationship between proactive personality and proactive work behaviors.

Fourth, the literature on servant leadership is reviewed. This includes examining the different conceptualizations of servant leadership, and the varying measurements of servant leadership. Empirical research on servant leadership will be reviewed. Hypotheses are presented that propose servant leader characteristics as an antecedent to psychological empowerment and the four proactive work behaviors. In addition,

psychological empowerment is hypothesized as a mediator between servant leader characteristics and the four proactive work behaviors.

Proactive Work Behavior

Practitioners have advocated the importance of proactive work behavior for decades. One practitioner has taught that individuals should be proactive, rather than passive, to act rather than be acted upon, and initiate change rather than waiting passively while the environment dictates their behavior (Covey, 1989). Scholars have also recognized the applicability of proactive work behavior to the field of organizational science (Ashford & Cummings, 1985; Bateman & Crant, 1993; Grant & Ashford, 2008). Proactive work behavior has been proposed as active behavior that is initiated by the individual, focused on bringing positive change in themselves or their environment, and future focused (Grant & Ashford, 2008; Parker, Bindl, & Strauss, 2010). A substantial amount of empirical investigation of proactive work behavior has been done.

Ashford and Cummings (1985) completed one of the first studies on a specific type of proactive behavior called feedback seeking behavior (FSB). FSB is the tendency of an individual to seek out feedback on their work related actions. The authors used a sample of 172 employees from a utility company. They reported that individuals' feedback seeking behavior was correlated with role ambiguity (r= .15), contingency uncertainty (r= .20) and job involvement (r=.20). They also reported that tolerance for ambiguity moderated the positive relationship between contingency uncertainty and feedback seeking behavior. Finally, they reported that job tenure was negatively correlated with feedback seeking behavior (r= -.33).

Ashford & Black (1996) examined the proactive behaviors individuals engage in during the socialization into a new organization. They proposed that during the entry process, individuals lose control, which leads individuals to use proactive behaviors to gain back a feeling of control. These proactive behaviors lead to greater job performance and satisfaction. They reported that a desire for control was positively related to information seeking (β= .30), general socializing (β= .24), building relationships with interdepartmental colleagues (β= .29), negotiation of job changes (β= .24), positive framing (β= .22), and unrelated to feedback seeking and building relationships with their boss. They also reported that individual job satisfaction was related to information seeking (β= -.28), general socializing (β= .31), negotiation of job changes (β= -.34), and positive framing (β= .44). Individual job performance was positively related to building relationship with boss (β= .56) and positive framing (β= .31). Finally, they reported that positive framing acted as a mediator for the effect of desire for control on performance.

Van Dyne and LePine (1998) used a sample of 597 employees to examine the differentiating impact of extra-role and in-role behavior in explaining employee performance. Factor analysis showed that extra-role behaviors (i.e., helping and voice) were distinct from in-role behavior. The authors reported that extra-role behaviors explained a significant amount of variance in supervisor-rated performance after controlling for age, tenure in group, education, sex, firm type, job level, and in-role behavior. They concluded that extra-role behavior seemed to be an applicable predictor of job performance beyond just in-role behavior.

Morrison and Phelps (1999) used a sample containing 491 employees who were enrolled part-time in a MBA program. They examined the extra-role behavior of taking

charge. They reported a factor analysis that showed taking charge was distinct from two other extra-role behaviors (i.e., civic virtue and altruism), and in-role behavior. They reported that taking charge was positively related to top management openness (r= .29), group norms (r= .22), general self-efficacy (r= .31), felt responsibility (r= .25), and expert power (r= .24). Finally, after completing a multiple regression analysis, the authors reported that top management openness (β= .15), general self-efficacy (β= .20), and felt responsibility (β= .28) predicted the extra-role behavior of taking charge.

Parker (2000) used a sample containing 650 employees from a manufacturing company in the United Kingdom to examine flexible role orientation and role breadth self-efficacy. Factor analysis showed that flexible role orientation and role breadth self-efficacy were distinct from job satisfaction, organizational commitment, and job strain. Job autonomy and change receptiveness were found to be antecedents of flexible role orientation and role breadth self-efficacy. Finally, it was proposed that flexible role orientation and role breadth self-efficacy are potential antecedent of positive behavior.

Parker, Williams, and Turner (2006) used a sample consisting of 282 production employees to examine if four cognitive motivational states (i.e., role breadth self-efficacy, control appraisals, change orientation, and flexible role orientation) mediated the relationship between proactive personality and proactive work behavior (i.e., proactive idea implementation and proactive problem solving). They also examined if these four cognitive motivational states mediated the relationship between perceived work environment (i.e., job autonomy, co-worker trust, and supportive supervision). Proactive personality was found to be positively correlated with job autonomy (r= .34), coworker trust (r= .18), supportive supervision (r= .27), role breadth self-efficacy (r=

.42), change orientation (r= .17), flexible role orientation (r= .29), proactive work behavior (r= .26), and affective commitment (r= .16). By using structural equation modeling, it was found that only two of the four motivational states (i.e., role breadth self-efficacy and flexible role orientation) mediated the relationship between proactive personality and proactive work behavior. Similarly, only role breadth self-efficacy and flexible role orientation mediated the relationship between job autonomy, co-worker trust, and proactive behavior.

Griffin, Neal, and Parker (2007) proposed a model of positive work role behaviors, which distinguished nine subdimensions of individual work role behaviors. They cross-classified individual task behaviors, team member behaviors, and organization member behaviors with proficiency, adaptivity, and proactivity to create nine subdimensions (i.e., individual task proficiency, individual task adaptivity, individual proactivity, team member proficiency, team member adaptivity, and team member proactivity, organization member proficiency, organization member adaptivity, and organization member proactivity). Using factor analysis, they were able to show that these nine subdimensions were unique. Structural equation modeling showed that role clarity was the strongest antecedent for individual task proficiency (β= .30). Openness to change was the strongest antecedent of individual task adaptivity (β= .30), team member adaptivity (β= .27), and organization member adaptivity (β= .39). Role breadth self-efficacy was found to be the strongest antecedent to individual task proactivity (β= .35), team member proactivity (β= .33), and organization member proactivity (β= .33).

Grant, Parker, and Collins (2009) used a sample of 103 managers, and a second sample of 55 firefighters to examine if employees' values and affect moderated the

relationship between proactive work behavior and supervisor performance evaluations. They used three proactive behaviors (i.e., voice, issue-selling, and taking charge), and modeled a second-order latent construct of proactive work behavior. They reported that proactive work behavior was positively associated with supervisor evaluated performance (β= .69). Also, negative affect moderated the relationship (β= -.16) between proactive behavior and supervisor evaluated performance. Finally, prosocial values were found to moderate (β= .26) the relationship between proactive work behavior and supervisor evaluated performance. In the second sample of 55 firefighters they found that the proactive behavior of anticipatory helping was positively associated with supervisor performance evaluations (β= .35). In addition, prosocial values (β= .27) and negative affect (β= -.30) moderated the relationship between anticipatory helping and supervisor performance evaluations.

Parker and Collins (2010) used a sample of 622 managers to identify three higher-order proactive behavior categories: proactive work behavior (i.e., initiating positive change in the internal organization), proactive strategic behavior (i.e., the organization's compatibility with the external environment), and proactive person-environment fit behavior (i.e., the individual's fit within the organizational environment). Using a second sub-sample of 319 employees they examined proactive personality, consideration of future consequences, learning and performance goal orientation, role breadth self-efficacy, and felt responsibility as antecedents.

Parker and Collins (2010) reported that proactive personality was found to be an antecedent to the proactive work behaviors of taking charge (β= .26), individual innovations (β= .28), problem prevention (β= .24), and voice (β= .28). Proactive

personality was also reported as an antecedent to the proactive strategic behavior of issue selling credibility (β= .20). Next, consideration of future consequences was found to be significantly related to the proactive strategic behaviors of issue selling credibility (β= .14), strategic scanning (β= .19), issue selling willingness (β= .12). In addition, it was found to be an antecedent to the proactive work behavior of individual innovation (β= .12), and the proactive person environment fit behaviors of feedback monitoring (β= .14), and career initiative (β= .16).

Parker and Collins (2010) also reported that learning goal orientation was an antecedent to the proactive work behaviors of taking charge (β= .16), individual innovations (β= .12), problems prevention (β= .13) and the proactive person-fit environment fit behavior of feedback inquiry (β= .14). Performance goal orientation was negatively associated with the proactive strategic behaviors of issue selling credibility (β= -.20), strategic planning (β= -.15), issue selling willingness (β= -.14).

Conscientiousness was reported as an antecedent to the proactive person-environment fit behaviors of feedback inquiry (β= .18), feedback monitoring (β= .15), and job change negotiation (β= .13). Role breadth self-efficacy was also found to be an antecedent to proactive work behavior (i.e., taking charge, individual innovation, and problem prevention) and proactive strategic behaviors (i.e., issue selling credibility, strategic scanning), and the proactive person-environment fit behavior of job change negotiation. Finally, felt responsibility was an antecedent to the proactive work behaviors of taking charge (β= .42), individual innovation (β= .18), problem prevention (β= .22), and voice (β= .24) (Parker & Collins, 2010).

Griffin, Parker, and Mason (2010) conducted a study which measured employees' self-perceptions at time 1 and the relationship with performance a year later (i.e., time 2). Employees' perception of their openness to work role change and their perception of their leader's vision interacted to predict adaptive work performance at time two. Leader vision and employees role breadth self-efficacy interacted to predict proactive performance at time 2.

As illustrated above, scholars have typically examined separate proactive behaviors. Recently Parker and Collins (2010) showed through empirical investigations that these separate proactive behaviors can be categorized into proactive work behaviors, proactive strategic behaviors, and proactive person-environmental fit behaviors. Each of these second-order factors have underlying dimensions, which consist of specific proactive work behaviors. This study examined the second order factor of proactive work behaviors and its underlying four dimensions of taking charge, voice, individual innovation, and problem prevention.

The proactive work behaviors of taking charge, voice, individual innovation, and problem prevention all seek for positive change in the internal organization environment (Parker & Collins, 2010). Taking charge has been argued as a form of extra-role behavior, which entails voluntary, constructive, and change-oriented efforts to bring about positive functional change (Morrison & Phelps, 1999). Taking charge attempts to influence the way work is executed (Parker & Collins, 2010). Voice has also been classified as a type of promotive extra-role behavior, which emphasizes expression of constructive challenges that will improve standard procedures (Van Dyne & LePine, 1998). This entails expressing views even when others may disagree (Parker & Collins,

2010). Individual innovation is focused on recognizing new and emerging opportunities, generating new ideas, and implementing those ideas (Parker & Collins, 2010). Individual innovation is focused on novelty, which makes it distinct from voice or taking charge (Parker & Collins, 2010). Finally, problem prevention seeks to find the root cause of a problem and prevent future problems from occurring (Parker & Collins, 2010). These four proactive behaviors are unique; however, they share the intent to bring about positive change within their organization and are considered as a latent factor of proactive work behavior.

Proactive Personality

Proactive personality is the trait-like nature of proactive behavior. Proactive personality is conceptualized as having a tendency to engage in proactive behaviors across varying situations and contexts (Bateman & Crant, 1993; Crant, 2000). Proactive personality has received a steady amount of empirical investigation over the last two decades and these studies will be reviewed next.

Bateman and Crant (1993) developed a measure of proactive personality and then tested the nomological network associated with an individual's proactive personality. First, they performed a factor analyzes of data gathered from 282 undergraduates to determine that a 17 item one dimensional proactive personality scale was the best fit for the data. Second, using a sample of 130 undergraduates they examined the relationship between the proactive personality scale and the Big Five. They reported that proactive personality correlated with conscientiousness (r= .43), extraversion (r= .25), but was not significantly related to openness, agreeableness or neuroticism. Finally, they used a sample of 148 MBA students to examine the relationship between proactive personality

and multiple outcome variables. They reported that the proactive scale was positively correlated with need for achievement (r= .45), need for dominance (r=.43), extracurricular activities aimed at constructive change (r= .29), peer nominations of transformational leadership (r= .33), and personal achievements (r= .21).

Crant (1996) used a sample of 181 undergraduate students to examine their entrepreneurial intentions. Findings were reported that showed entrepreneurial intentions were positively related to proactive personality (r= .48), gender (r= .21), education, (r= .24), and entrepreneurial parents (r= .21). In addition, proactive behavior explained an additional 17.1% of the variance after controlling for gender, education, and entrepreneurial parents.

Seibert, Crant, and Kraimer (1999) used a sample of 496 employees to examine individuals' proactive personality as an antecedent of two objective measures of career success (i.e., salary, and promotions), and one form of subjective career success (i.e., career satisfaction). They reported that proactive personality was significantly related to salary (β= .11), promotions (β= .12), and career satisfaction (β= .30) after controlling for a large number of demographic, motivational, organizational, and industry variables.

Thompson (2005) used a sample of 126 employee supervisor dyads to examine the relationship between proactive personality and job performance. Findings were reported that showed positive correlations between proactive personality and network building (r= .22), initiative taking (r= .23), and performance (r= .19). In addition, structural equation modeling showed that network building and initiative taking mediated the relationship between proactive personality and job performance.

Greguras and Diefendorff (2010) used a sample of 165 full-time employees from Singapore to examine the relationship between proactive personality and life satisfaction, job performance, and organizational citizenship behavior. They reported that self-concordance, goal attainment and need satisfaction mediated the relationship between proactive personality and life satisfaction, job performance and organizational citizenship behavior.

In summary, proactive personality has been linked to need for achievement, need for dominance, extracurricular activities, and personal achievement (Bateman & Crant, 1993), entrepreneurial intentions (Crant, 1996), career success (Seibert, Crant, & Kraimer, 1999), job performance (Thompson J. A., 2005), organizational citizenship behaviors, life satisfaction, and job satisfaction (Greguras & Diefendorff, 2010). Finally, previous study has established a relationship between proactive personality and proactive work behaviors of voice, taking charge, individual innovation, and problem prevention (Griffin, Neal, & Parker, 2007; Parker & Collins, 2010). It was anticipated that this established relationship would be replicated in this study.

Hypothesis 1: At the individual level, proactive personality will be positively related to individual level employee proactive work behaviors of taking charge, voice, individual innovation, and problem prevention.

Psychological Empowerment

Practitioners and scholars have long been enthused with the idea of employee empowerment. In academia, psychological empowerment has received considerable attention since its introduction to the field of organizational science (Conger & Kanungo,

1988; Thomas & Velthouse, 1990). This early theoretical work was later operationalized by Spreitzer (1995), who created a measurement of psychological empowerment for the workplace. Spreitzer (1995) proposed a second-order factor of psychological empowerment, which consisted of four dimensions that combined additively to form an overall construct of psychological empowerment. These four dimensions consisted of meaning (which is congruence between an individual's values, beliefs, and their work role), competence (an individual's belief in their ability to accomplish their work role), self-determination (an individual's belief in their sense of power to initiate work role requirements), and impact (the degree an individual can influence work role outcomes).

Spreitzer (1995) used two different samples (i.e., sample 1=393 managers; sample 2=128 employees) to examine personality and work contexts as antecedents and consequences of psychological empowerment. Self-esteem ($\gamma = .15$), access to information ($\gamma = .45$), and rewards ($\gamma = .21$), were found to be antecedents of psychological empowerment. Innovation ($\gamma = .30$) and managerial effectiveness($\gamma = .25$) were found to be consequences of psychological empowerment.

Spreitzer (1996) examined work unit design characteristics as antecedents of individual psychological empowerment. Data was reported that found positive associations between psychological empowerment and span of control (β=.09), sociopolitical support (β=.15), access to information (β=.19), and work climate (β=.12). Psychological empowerment was reported as being negatively related to role ambiguity (β= -.20). This study tested earlier propositions that the organizational context can impact psychological empowerment (Thomas & Velthouse, 1990).

Spreitzer, Kizilos, and Nason (1997) examined the four dimensions of psychological empowerment as predictors of work effectiveness, work satisfaction, and job related strain. Work effectiveness was positively related to competence (β=.20) and impact (β=.17). Work satisfaction was positively related to meaning (β=.29) and self-determination (β=.17). Job strain was negatively associated with competence (β= -.26).

Kraimer, Seibert, and Liden (1999) used a sample of 160 nurses to examine the structural equivalence of Spreitzer's (1995) model of psychological empowerment. They reported results that supported the four dimensional model of empowerment. They also tested possible antecedents and consequences of the four dimensions. Job meaningfulness ($\gamma = .48$) was reported as an antecedent to the dimension of meaning. Job autonomy ($\gamma = .86$) was an antecedent to the dimension of self-determination. Task feedback was an antecedent to the dimension of competence ($\gamma = .32$) and impact ($\gamma = .22$). In addition, career intention was a consequence of meaning ($\gamma = .70$) and competence ($\gamma = .33$). Organizational commitment was a consequence of self-determination ($\gamma = .24$) and impact ($\gamma = .41$).

Spreitzer, de Janasz, and Quinn (1999) examined the relationship between managers' psychological empowerment and innovation, upward influence, inspiration, and monitoring. Psychological empowerment was positively related to innovation ($\gamma = .38$), upward influence($\gamma = .44$), and inspiration ($\gamma = .12$). Managers who perceived themselves as having higher psychological empowerment were perceived by their followers as being more innovative, having greater upward influence, and being more inspirational. Psychological empowerment was not significantly related to monitoring.

Seibert, Silver, and Randolph (2004) examined a cross-level model of psychological empowerment. They proposed a model with psychological empowerment as a mediator of empowerment climate (group level), and individual performance and job satisfaction both at the individual level. They reported findings that showed psychological empowerment as being positively related to individual level performance and job satisfaction. In addition, psychological empowerment was a partial mediator between psychological climate and work performance, and a full mediator with job satisfaction. The authors also proposed that work unit leadership may explain the between-group variance in psychological empowerment.

Castro, Villegas, Perinan, and Bueno (2008) tested psychological empowerment as a mediator between transformational leadership and two outcomes: job satisfaction and affective commitment. The authors obtained a sample consisting of 437 participants from a Spanish multi-national food and beverage company. They reported that transformational leadership was positively associated with psychological empowerment($\gamma = .72$). Psychological empowerment was positively associated with general job satisfaction($\gamma = .70$) and affective commitment to the organization($\gamma = .74$). Thus, psychological empowerment mediated the effects of transformational leadership on general job satisfaction and commitment to the organization.

Pieterse, Knippenberg, Chippers, and Stam (2010) examined a model of psychological empowerment as a moderator to both transformational and transactional leadership with follower innovative behavior. Transactional leadership had a main effect with innovative behavior (β= -.22), whereas transformational leadership did not. Both

transactional leadership (β= -.20) and transformational leadership (β= .17) significantly interacted with psychological empowerment.

Zhang and Bartol (2010) proposed psychological empowerment as a mediator between empowering leadership and the creative process of engagement and intrinsic motivation. They found that empowering leadership was positively related to psychological empowerment($\gamma = .81$). Psychological empowerment was also positively related to creative process engagement ($\gamma = .19$) and intrinsic motivation($\gamma = .31$). Psychological empowerment was found to be a mediator of the relationship between empowering leadership and the creative process of engagement. It was also a mediator between empowering leadership and intrinsic motivation.

In summary, researchers have found that psychological empowerment is positively associated with a variety of meaningful outcomes. Consequences of psychological empowerment are innovation, managerial effectiveness (Spreitzer, 1995), work effectiveness, satisfaction, (Spreitzer, Kizilos, & Nason, 1997), career intention, organizational commitment (Kraimer, Seibert, & Liden, 1999), leader innovation, leader upward influence, leader inspiration (Spreitzer, de Janasz, & Quinn, 1999), individual level performance, individual level job satisfaction (Seibert, Silver, & Randoph, 2004), general job satisfaction, affective commitment to the organization (Castro, Villegas Perinan, & Bueno, 2008), creative process engagement, intrinsic motivation (Zhang & Bartol, 2010), and negatively related to job strain (Spreitzer, Kizilos, & Nason, 1997). Researchers have not considered psychological empowerment as an antecedent to proactive work behaviors.

Intuitively it seems that individuals need to feel a sense of empowerment before they are willing to engage in proactive work behaviors. Empirical research also gives some evidence for the idea that a motivational state, such as psychological empowerment, may be an antecedent to proactive work behaviors (Parker, Williams, & Turner, 2006). To date, this relationship has not been explicitly studied. However, because of the numerous consequences of psychological empowerment possible hypothesis can be proposed.

Researchers have already examined psychological empowerment as an antecedent to one of the four dimensions of proactive work behavior. Psychological empowerment has been positively related to manager innovation (Spreitzer, 1995) and employee innovation (Pieterse, Knippenberg, Chippers, & Stam, 2010). Research has also found that psychological empowerment is positively related to creative process engagement (Zhang & Bartol, 2010). One of the dimensions of creative process engagement is idea generation, which is similar to the proactive behavior of individual innovation and its purpose of finding opportunities, creating ideas, and carrying out those ideas (Morrison & Phelps, 1999). Psychological empowerment also seems likely to be related to the other three proactive work behaviors.

Psychological empowerment consists of individuals having confidence in their ability to accomplish their role (Spreitzer, 1995). Similarly, self-efficacy has been shown to be an antecedent to taking charge (Morrison & Phelps, 1999). Psychological empowerment also consists of an individual's perception that their work role has meaning, and that they have a chance to change their work role in a positive manner (Spreitzer, 1995) . An antecedent to taking charge is felt responsibility, or the notion that

an individual is responsible for bringing about positive change (Morrison & Phelps, 1999). Finally, psychological empowerment is the perception that individuals are in control and can initiate work role changes—they have self-determination (Spreitzer, 1995). Similarly, an antecedent to voice would be an individual who feels they have the control to initiate changes, regardless of what others say (Parker & Collins, 2010). Therefore, psychological empowerment will be positively related to proactive work behaviors.

> Hypothesis 2: At the individual level, psychological empowerment will be positively related to individual level employee proactive work behaviors of taking charge, voice, individual innovation, and problem prevention.

Researchers have also looked at a variety of antecedents to psychological empowerment: both personality antecedents and also environmental or contextual antecedents. These include self-esteem, rewards, access to information (Spreitzer, 1995), span of control, sociopolitical support, work climate (Spreitzer, 1996), job meaningfulness, job autonomy, task feedback (Kraimer, Seibert, & Liden, 1999), work-level psychological climate (Seibert, Silver, & Randoph, 2004), transformational leadership (Avolio, Zhu, & Koh, 2004; Castro, Villegas Perinan, & Bueno, 2008; Pieterse, Knippenberg, Chippers, & Stam, 2010), transactional leadership (Pieterse, Knippenberg, Chippers, & Stam, 2010), and empowering leadership (Zhang & Bartol, 2010). One personality antecedent that has not been examined is the proactive personality trait.

A proactive personality consists of an individual that is active and seeks to positively change themselves or their environment (Crant, 2000). A proactive personality leads individuals to seek out information, opportunities, and solutions. Proactive personality has been linked to extracurricular activities, personal achievements (Bateman & Crant, 1993) and entrepreneurial intentions (Crant, 1996). A proactive personality allows individuals to have a perception that they can make a difference and be active participants of their work role. Therefore, it seems plausible that a proactive personality will be an antecedent to psychological empowerment.

Hypothesis 3: At the individual level, proactive personality will be positively related to psychological empowerment.

The process of how proactive personality is related to proactive behaviors needs further investigation. Previously research has shown that motivational cognitive states like role breadth self-efficacy and flexible role orientation can mediate the relationship between proactive personality and proactive behaviors (Parker, Williams, & Turner, 2006). Psychological empowerment is a motivational state that may help further explain this relationship. Previous research has shown that initiative taking mediates the relationship between proactive personality and performance (Thompson J. A., 2005). This seems conceptually similar to psychological empowerment, which is the perception an individual has that they can initiate, and bring forth positive changes in their work role. Therefore, psychological empowerment will mediate the relationship between

proactive personality and the four proactive work behaviors of taking charge, voice, individual innovation, and problem prevention.

Hypothesis 4: At the individual level, psychological empowerment will mediate the relationship between proactive personality and the proactive work behaviors of taking charge, voice, individual innovation, and problem prevention.

Servant Leadership

Conceptualizing a leader as a servant has been a topic that has been discussed for centuries. An ancient Chinese sage named Lao-tzu proposed, in the sixth century, that leadership is service, and leaders are to guide, assist, develop and strengthen their followers (Ching & Ching, 1995). Centuries later Jesus Christ became the model of servant leadership as he taught and modeled the importance of leaders serving their followers (Sendjaya & Sarros, 2002).

In the twentieth century Robert Greenleaf (1977) is credited with conceptualizing the leader as a servant, and the subsequent title servant leadership. Greenleaf proposed the ultimate test of a servant leader when he stated:

> "The best test, and difficult to administer, is this: Do those served grow as persons? Do they, while being served become healthier, wiser, freer, more autonomous, more likely themselves to become servants? And, what is the effect on the least privileged in society? Will they benefit or at least not be further deprived?" (Greenleaf, 1977, p. 27).

This quote highlights the outcomes of servant leadership. Servant leaders enable their followers to become wiser, freer, more autonomous, and independent. This quest to facilitate, foster, and cultivate lasting evolutionary growth in individuals is a central tenet of servant leadership (Van Dierendonck, 2011).

Servant leadership is also an ethical and moral form of leadership. Servant leaders recognize the needs and concerns of multiple stakeholders (Graham, 1991; Liden, Wayne, Zhao, & Henderson, 2008), and seek to address these needs through moral altruistic acts of service (Barbuto & Wheeler, 2006; Smith, Montagno, & Kuzmenko, 2004). Servant leaders are centrally focused on satisfying the needs of their followers, which facilitates an environment of cohesion, concern, and trust (Van Dierendonck, 2011; Walumbwa, Hartnell, & Oke, 2010).

The last decade has seen an increase in conceptualizations of servant leadership (Russell & Stone, 2002; Sendjaya & Sarros, 2002; Stone, Russell, & Patterson, 2004; Smith, Montagno, & Kuzmenko, 2004), and the last six years has brought stronger empirical investigation of servant leadership (Barbuto & Wheeler, 2006; Ehrhart, 2004; Jaramillo, Grisaffe, Chonko, & Roberts, 2009; Liden, Wayne, Zhao, & Henderson, 2008; Sendaya, Sarros, & Santora, 2008; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Walumbwa, Hartnell, & Oke, 2010). The different conceptualizations and measurements of servant leadership will be reviewed next.

Conceptualization of Servant Leadership

One of the first attempts by an academic researcher to understand servant leadership was a conceptual paper (Graham, 1991), which distinguished servant leadership from three popular forms of leadership: Weberian charismatic authority,

personal celebrity charisma, and transformational leadership. Graham (1991) positioned servant leadership as a form of charisma that was both inspirational and moral. Graham conceptualized a servant leader as someone who was humble, focused on the common good, and who had relational power, vision, a way of life that was service oriented, follower autonomy, moral development, and followers who emulated the servant leader's example.

A short time later Spears (1995), the chief executive officer of The Greenleaf Center for Servant leadership, analyzed the writings of Greenleaf, and in vivo coded ten themes that he saw as being continuously repeated in describing a servant leader. These themes consisted of listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to the growth of people, and building community.

Spears (1995) also proposed that servant leadership involves evolutionary change, which is long-term steady and sustainable growth. This is in contrast to leadership styles that offer a quick-fix solution. He saw servant leadership as a new model of leadership, which is in contrast to the traditional autocratic and hierarchical models of leadership. Spears saw servant leadership as a form of leadership that could be applied in many different contexts (i.e., businesses, education, non-profit, churches, foundations, and communities).

Farling, Stone, & Winston (1999) reviewed the literature and proposed a model of servant leadership that consisted of five variables: vision, influence, credibility, trust, and service. They positioned these five variables in a hierarchical model, which was a cyclical process that brought leader and follower to a higher level of performance and

self-actualization. They suggested that servant leadership is based on the values, principles, and beliefs of the servant leader, which is in contrast to a behavioral based model such as transformational leadership.

Russell and Stone (2002) reviewed the literature and put forth nine functional attributes: vision, honesty, integrity, trust, service, modeling, pioneering, appreciations of others, and empowerment. They also proposed eleven attributes of servant leadership: communication, credibility, competence, stewardship, visibility, influence, persuasion, listening, encouragement, teaching, and delegation. Russell and Stone (2002) concluded that values and core beliefs are antecedents to servant leadership.

Patterson (2003) completed a dissertation that has received some attention in the servant leadership literature. She developed a theory of servant leadership that focused on the values that servant leadership is based upon. She defined a servant leader as someone with agapao love, acts with humility, is altruistic, is visionary for the followers, is trusting, is serving, and empowers followers.

Researchers have varied in the number of characteristics of a servant leader (see Table 1), which has led researchers to struggle with precisely conceptualizing servant leadership (Bowman, 1997). It wasn't until scholars began to empirically examine these early conceptualizations of servant leadership that substantial progress started to be made (Barbuto & Wheeler, 2006; Ehrhart, 2004; Liden, Wayne, Zhao, & Henderson, 2008; Sendaya, Sarros, & Santora, 2008). Like any new stream of research, these initial long lists of characteristics have been refined through empirical testing; and it is through these empirical examinations of servant leadership that substantial progress has been made. Seven different measurements have been developed that all measure servant leadership.

Empirical Measurements of Servant Leadership

Organizational Leadership Assessment (OLA): The first empirical measurement of servant leadership was a dissertation (Laub, 1999). This dissertation created a measurement called the Organizational Leadership Assessment (OLA), which measured servant leadership at the organizational level. Laub (1999) sent questionnaires to a panel of 14 experts and reviewed the literature to propose an agreed-upon list of the characteristics of servant leadership at the organizational level. He proposed six subscales: someone that values people, develops people, builds community, displays authenticity, provides leadership, and shares leadership. Sixty items were developed that measured each subscale, and items were included that measured participants' job satisfaction. The alphas for each subscales were .90-.93. The exploratory factor analysis showed two factors: one factor for the servant leadership items, and one factor for the job satisfaction items.

Servant Leadership profile (SLP): Page and Wong (2000) proposed 12 dimensions of servant leadership: integrity, humility, servanthood, caring for others, empowering others, developing others, visioning, goal-setting, leading, modeling, team-building, and shared decision making. Dennis and Winston (2003) conducted an exploratory factor analysis on Page and Wong's (2000) work, which found three factors: empowerment, service, and vision.

One dimensional measure: Ehrhart (2004) used a 14 item one-dimensional model of servant leadership to test the effects of servant leadership on organizational citizenship behaviors. This had seven subscales: forming relationships with subordinates, empowering subordinates, helping subordinates grow and succeed, behaving ethically,

having conceptual skills, putting subordinates first, and creating value for those outside of the organization. This one dimensional model was the basis used in a later measure developed by Liden et al (2008) that is discussed in more detail below.

Servant Leadership Assessment Instrument (SLAI): Dennis and Bocarnea (2005) built a servant leadership measurement that measured Patterson's (2003) definition of servant leadership (i.e., agapao love, empowerment, humility, altruism, vision, trusting, and serving). They used a sample of 300 participants to empirically test their measure. A reliability analysis showed alphas of .77-.94, and an exploratory factor analysis showed five factors: love, empowerment, vision, humility, and trust. Trust only had two items. The instrument failed to measure altruism and service. No confirmatory factor analysis was performed.

Servant Leadership Questionnaire (SLQ): Barbuto and Wheeler (2006) used Spears (1995) ten characteristics of a servant leader and added one additional characteristic (i.e., calling), which they felt Greenleaf had repeatedly written about. They operationalized all 11 characteristics and created items measuring each characteristics. Content validity was obtained through the literature and by using an expert panel. Items were then given to 80 elected officials and 388 raters.

Exploratory factor analysis was completed on the rater sample. Five factors were supported by the data: altruistic calling, emotional healing, persuasive mapping, wisdom, and organizational stewardship. Confirmatory factor analysis was then completed on the leader sample. The data supported the five factor structure. Convergent and divergent validity was tested using transformational leadership and leader-member-exchange (LMX). The criterion validity of the measurement was tested by looking at the motivation

to perform extra work, employee satisfaction, and perceptions of organizational effectiveness. All five subscales were shown to positively relate to extra effort, satisfaction, and effectiveness. Servant leadership was a better predictor of LMX quality than transformational leadership. The servant leadership questionnaire (SLQ) has a rater-report version and a self-report version. Although this wasn't the first measure created, it was the first that attempted both an exploratory and confirmatory factor analysis. In addition, it was the first to try to establish some convergent and discriminate validity in relations to other leadership styles and outcomes.

Servant Leadership Behavior Scale (SLBS): Sendjaya, Sarros, and Santora (2008) felt the previous servant leadership measurements lacked a dimension of spirituality, so they produced another servant leadership measurement. This included six dimensions: voluntary subordination, authentic self, covenantal relationships, responsible morality, transcendent spirituality, and transforming influence. They used qualitative interviews with 15 experts in addition to the standard literature review, to obtain content validity. They also completed the content validity ratio, which further eliminates or retain items. A confirmatory factor analysis was performed using a sample (n=277) of graduate students. Data showing criterion validity, convergent and divergent validity were missing.

Table 1
Conceptualization of Servant Leadership

	Graham (1991)	**Spears (1995)**	**Farling, Stone, & Winston (1999)**	**Russell & Stone (2002)**	**Patterson (2003)**
Characteristics of Servant Leader	1. Vision 2. Humble 3. Relational power 4. Service-oriented 5. Common good	1. Listening 2. Empathy 3. Healing 4. Awareness 5. Persuasion 6. Conceptualization 7. Foresight 8. Stewardship 9. Commitment to the growth of people 10. Building community	1. Vision 2. Influence 3. Credibility 4. Trust 5. Service	Nine functional attributes: 1. Vision 2. Honesty 3. Integrity 4. Trust 5. Service 6. Modeling 7. Pioneering 8. Appreciation of others 9. Empowerment Eleven attributes: 1. Communication 2. Credibility 3. Competence 4. Stewardship 5. Visibility 6. Influence 7. Persuasion 8. Listening 9. Encouragement 10. Teaching 11. Delegation	1. Agapao love 2. Humility 3. Altruistic 4. Vision 5. Trusting 6. Serving 7. Empowers followers

Servant Leadership Assessment (SLA): Liden, Wayne, Zhao, and Henderson, (2008) conceptualized servant leadership with seven dimensions: conceptual skills, empowering, helping subordinates grow and succeed, putting subordinates first, behaving ethically, emotional healing, and creating value for the community. They built upon a measurement of servant leadership used by Ehrhart (2004), while also borrowing some from Barbuto and Wheeler (2006). This measure puts more of a focus on follower development and the ethical behavior of a servant leader.

Liden, Wayne, Zhao, and Henderson (2008) used a sample of 298 students and a second sample of 145 subordinates and 17 supervisors to validate their measure. Using this measure, servant leadership predicted community citizenship behaviors, in-role performance, and organizational commitment. In addition to their exploratory factor analysis, their confirmatory factor analysis supported their seven dimensions. Convergent and divergent validity was obtained by using transformational leadership and LMX. This is the second measurement that used both an exploratory and confirmatory factor analysis to obtain some degree of measurement validity. It also established convergent and discriminate validity.

In summary, there has been a wide variety of conceptualizations and measurements of servant leadership (see Table 2). The measures created by Barbuto and Wheeler (2006) and Liden et al., (2008) both used exploratory and confirmatory factor analysis in their development, while also establishing discriminate and convergent validity. These two measurements seem the most psychometrically sound. Further research is needed to understand which one will hold up under rigorous empirical investigation, and become the gold standard for measuring servant leadership. To date,

there has been limited research using a multi-dimensional measure of servant leadership. For this study, the measurement of Barbuto and Wheeler (2006) was chosen, which identified five dimensions. Each of the five dimensions will be reviewed.

Altruistic Calling

Servant leaders have a desire to lead, whicht is coupled with a desire to serve others (Greenleaf, 1977; Van Dierendonck, 2011). This innate desire to serve stimulates servant leaders to engage in altruistic acts of goodness that are meaningful to their followers, and satisfy their needs (Barbuto & Wheeler, 2006). This focus on altruistic acts of kindness is one of the core tenets of servant leadership, and distinguishes it from other forms of leadership (Barbuto & Wheeler, 2006; Graham, 1991). These altruistic acts of goodness lead to the development and increased capacity of followers (Barbuto & Wheeler, 2006; Liden, Wayne, Zhao, & Henderson, 2008; Searle & Barbuto, 2011). Altruistic acts of goodness allow servant leaders to facilitate positive development at multiple levels of behavior (i.e., in individuals, organizations, communities, and societies) (Liden, Wayne, Zhao, & Henderson, 2008; Searle & Barbuto, 2011).

Emotional Healing

Servant leaders have an ability to facilitate the emotional healing of their followers in recovery from hardships, setbacks, and trauma (Barbuto & Wheeler, 2006). The emotional healing of followers is facilitated through the empathetic actions of servant leaders toward their followers' needs, desires, and problems (Barbuto & Wheeler, 2006; Liden, Wayne, Zhao, & Henderson, 2008). This acute sense of their followers' needs enables servant leaders to be skilled at cultivating relationships and environments that encourage others to share their concerns, ideas, dreams, problems, and promotes

emotional healing (Barbuto & Wheeler, 2006; Liden, Wayne, Zhao, & Henderson, 2008; Van Dierendonck, 2011).

Wisdom

Wisdom describes a servant leader as someone who has a keen sense of awareness of their surroundings, and is able to anticipate the consequences and implications of their observations (Barbuto & Wheeler, 2006). Servant leaders are alert and 'in touch' with their environment and rarely miss what is happening around them (Greenleaf, 1977). This wisdom enables them to have the necessary discernment to understand the interplay between their immediate context and the larger surrounding environment (Barbuto & Wheeler, 2006).

Persuasive Mapping

Servant leaders have the conceptual skill necessary to visualize greater possibilities (Barbuto & Wheeler, 2006). This conceptual skill is coupled with a degree of charisma, which makes these possibilities seem exciting and motivating for followers (Graham, 1991). Servant leaders have the metacognitive skills necessary to understand how to construct and conceptualize knowledge in a meaningful and relevant way for followers. Persuasive mapping allows individuals and organizations to break from normality and see greater possibilities (Barbuto & Wheeler, 2006).

Table 2
Comparison of Servant Leadership Measurements

	Laub (1999)	Page & Wong, (2000)	Patterson (2003)	Barbuto & Wheeler (2006)	Sendjaya, Sarros, & Santora (2008)	Liden, Wayne, Zhao, & Henderson (2008)
Items	60 items	23 items	25 items	23 items	35 items	28 items
Dimensions	6 subscales (α=.91-.93)	3 dimensions (α=.89-.97)	5 dimensions (α=.77-.94)	5 dimensions (α=.82-.92)	6 dimensions (α=.72-.93)	7 dimensions(α=.76-.86)
Names of subscales	• Values people • Develops people • Builds community • Displays authenticity • Provides leadership • Shares leadership	• Empowerment • Service • Vision	• Love • Empowerment • Vision • Humility • Trust	• Altruistic calling • Persuasion mapping • Emotional healing • Wisdom • Organizational Stewardship	• Voluntary subordination • Authentic self • Covenantal relationships • Responsible morality • Transcendental Spirituality • Transforming influence	• Conceptual skills • Empowering • Helping subordinates grow and succeed • Putting subordinates first • Behaving ethically • Emotional healing • Creating value for the community
Content validity:	Literature, expert panel	Literature	Literature, expert panel	Literature, expert panel	Literature, interviews with 15 experts	Literature, expert panel
Criterion validity	Job satisfaction	None	None	• Extra work • Employee satisfaction • Organizational effectiveness	None	• Community citizenship behaviors • In-role performance • Organizational commitment
EFA	Yes (n=828)	Yes (n=514)	Yes (n=300)	Yes (n=388)	No	Yes (n=298)
CFA	No	No	No	Yes (n=80)	Yes (n=277)	Yes (n=182)
Convergent and divergent validity	None	None	None	Yes (i.e., transformational leadership and LMX)	None	Yes (i.e., transformational leadership and LMX)
Distinguishing feature	Organizational level of servant-leadership			First try to establish convergent and divergent validity, CFA, and substantial criterion validity.	Added a spirituality and responsible moral dimension	Established convergent and divergent validity, CFA, and criterion validity. Added empowering, and helping others succeed dimensions.

Organizational Stewardship

Servant leaders are interested in satisfying the needs of multiple stakeholders, and in preparing their organizations and its members to make positive contributions to the surrounding community, environment, and society (Barbuto & Wheeler, 2006). Servant leaders advocate that their organization creates value for the community, and they behave morally and ethically (Liden, Wayne, Zhao, & Henderson, 2008; Sendaya, Sarros, & Santora, 2008). This objective is accomplished by reaching out to the community through community development programs, outreach activities, and by facilitating company policies that benefit the surrounding community, society, and environment (Searle & Barbuto, 2011).

Empirical Studies on Servant Leadership

The empirical investigation of servant leadership started approximately five years ago. Since that time, there has been an increasing amount of, and more rigorous, empirical studies of servant leadership. These empirical studies show the typical progression of empirical research, which starts with correlation findings and progress to more complicated models. Each of these studies will be reviewed.

Ehrhart (2004) studied 249 departments from a grocery store chain to test servant leaderships' impact on unit level organizational citizenship behaviors. Results indicated that procedural justice climate (i.e., unit level fairness) mediated the relationship between servant leadership, and both helping and conscientiousness organizational citizenship behaviors, at the unit level.

Joseph and Winston (2005) used a convenience sample of 69 employed individuals to examine the correlation between perceptions of organizational servant

leadership, leader trust, and organizational trust. They reported findings that suggested that perceptions of organizational servant leadership were positively related with both outcome variables: leader trust and organizational trust. In addition, they reported that servant led organizations had higher levels of leader trust and organizational trust.

Barbuto and Wheeler (2006) reported findings that showed a positive relationship between servant leader characteristics and individual level outcome of extra effort, employee satisfaction, and perceptions of organizational effectiveness. They used a sample that included 80 leaders and 388 followers from a non-profit organization.

Washington, Sutton, and Field (2006) looked at the antecedents of a servant leader. They used a sample of 126 supervisors and 283 subordinates. They found that followers' perceptions of their leaders' value of empathy, integrity, and competence were positively related to followers perceptions of their leaders' servant leadership characteristics. In addition, they found that leaders' perceptions of their own agreeableness was related to their followers' perception of their servant leadership.

Irving and Longbotham (2007) looked at a U.S. division of an international non-profit organization (n=719) and found that servant leadership at the organizational level correlated with team effectiveness.

Taylor, Martin, Hutchinson, and Jinks (2007) found that public school principals who rated themselves high in terms of their perception of their use of servant leadership were also rated significantly higher by their teachers for all of the five best leadership practices (i.e., challenging the process, inspiring a shared vision, enabling others to act, modeling the way, and encouraging the heart).

Mayer, Bardes, and Piccolo, (2008) studied 187 undergraduates and reported relationships between servant leadership and follower job satisfaction, which was mediated by justice perceptions and need satisfaction. They found that servant leadership facilitated a fair and satisfactory environment, and their followers need fulfillment and job satisfaction increased.

Liden et al., (2008) reported findings that servant leadership characteristics at the individual-level were positively related to community citizenship behavior, in-role performance and organizational commitment. They used a sample of 145 subordinates and 17 leaders. They also attempted to examine servant leadership characteristics at the group level and its relationship with the three individual level outcomes. However, because of the low number of leaders at level-2, no relationships were found.

Neubert, Kacmar, Carlson, Chonko, and Roberts (2008) used a national sample of 250 employees to study the effects of leadership style on the self-regulatory mindset of employees. They found that a promotion focus mindset (i.e., need for growth, attention to gains, the attainment of aspirations and ideals) mediated the relationship between servant leadership and helping and creative behavior. In contrast, leaders who have an initiating structure style of leadership facilitate a prevention focus mindset (i.e., need for security, attention to looses, or the fulfillment of duties and obligations), which leads to in-role performance and deviant behavior from their employees. Through modeling servant leadership, leaders wereable to encourage nurturance, aspirations, gains, and ideals in their employees, which led to an increase in extra role helping orientation and creative behavior.

Jaramillo et al., (2009) sampled 501 full-time sales people and reported relationships between servant leadership and follower need fulfillment, follower development, and follower ethical behavior. Servant leadership related to person organization fit, which related to organizational commitment, and turnover intention. This study demonstrated that servant leadership leads to positive behavioral conditions, which impacted individual level outcomes. In this framework, servant leadership supported positive micro and macro-level behaviors, which then lead to positive outcomes.

Walumbwa, Hartnell, and Oke (2010) examined mediators of the relationship between group-level servant leadership and individual-level organizational citizenship behaviors. A sample of 815 employees and 123 leaders was used to investigate using a cross-level meditational model. They reported that commitment to the supervisor, self-efficacy, procedural justice climate, and positive service climate mediated the relationships between servant leadership at the group-level and organizational citizenship behaviors.

In summary, servant leadership has been found to be positively related to such variables as: trust (Joseph & Winston, 2005), organizational citizenship behaviors (Ehrhart, 2004), procedural justice (Walumbwa, Hartnell, & Oke, 2010), extra effort (Barbuto & Wheeler, 2006), organizational commitment (Liden, Wayne, Zhao, & Henderson, 2008), follower need fulfillment (Mayer, Bardes, & Piccolo, 2008), turnover (Jaramillo, Grisaffe, Chonko, & Roberts, 2009), and a promotional mindset (Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008). These studies show that servant leadership is positively related to important and relevant individual level behaviors, and may be a

possible antecedent to positive behaviors (Searle & Barbuto, 2011). Two important positive behaviors that haven't been studied in the servant leadership literature are proactive work behaviors and psychological empowerment. Contextual or environmental issues have also been proposed as possible antecedents to proactive work behaviors (Parker, Bindl, & Strauss, 2010; Parker, Williams, & Turner, 2006). The contextual antecedents are not as widely studied as has been noted above.

Servant leadership is theorized to be a style of leadership that is able to facilitate trust, respect, fairness, and loyalty (Van Dierendonck, 2011). Servant leaders are primarily focused on satisfying the needs of their followers (Greenleaf, 1977). Similarly, contextual variables such as leader support, strong interpersonal climate, and co-worker support are proposed antecedents to proactive work behaviors (Parker, Bindl, & Strauss, 2010). Servant leaders are also able to facilitate autonomy in their followers and help them become more independent and free to govern their lives, while making positive changes in their environment (Greenleaf, 1977; Liden, Wayne, Zhao, & Henderson, 2008). Therefore, it seems plausible that servant leadership will be a contextual antecedent to individual and group level proactive work behaviors.

Hypothesis 5: At the individual level, servant leadership is positively related to individual level employee proactive work behaviors of taking charge, voice, individual innovation, and problem prevention.

Hypothesis 6: At the group level, servant leader characteristics will have an incremental effect beyond that of the individual level of servant leadership

characteristics on employee proactive work behaviors of taking charge, voice, individual innovation, and problem prevention.

The vast number of outcomes associated with psychological empowerment give evidence to the potentially beneficial impact that psychological empowerment can have within organizations. Thus, as organizations choose to invest in developing psychological empowerment of their employees, they may see many positive benefits. This investment would increase employee productivity (Spreitzer, 1995; Spreitzer, de Janasz, & Quinn, 1999), efficiency (Spreitzer, Kizilos, & Nason, 1997), commitment (Kraimer, Seibert, & Liden, 1999), and satisfaction (Castro, Villegas Perinan, & Bueno, 2008; Spreitzer, Kizilos, & Nason, 1997). Therefore, organizations need to consider the work contexts that may facilitate psychological empowerment. For example: work climate, access to information, and transformational leadership have all been reported as antecedents to psychological empowerment (Avolio, Zhu, & Koh, 2004; Castro, Villegas Perinan, & Bueno, 2008; Seibert, Silver, & Randoph, 2004).

Though transformational leadership and transactional leadership have been found to be significantly related to empowerment, other styles of leadership also need to be considered. Transformational leadership focuses on obtaining organizational objectives, rather than developing and empowering individuals (Graham, 1991; Smith, Montagno, & Kuzmenko, 2004). In contrast, servant leadership is centered on the development of the followers and empowering them so they can make a difference (Searle & Barbuto, 2011; Smith, Montagno, & Kuzmenko, 2004). Servant leadership has been shown to be able to explain additional variance beyond that of transformational leadership and leader member exchange (Barbuto & Wheeler, 2006; Liden, Wayne, Zhao, & Henderson, 2008).

Servant leadership is a follower oriented style of leadership, and theoretically, a form of leadership that fosters positive follower attitudes of commitment, satisfaction, engagement, and empowerment (Van Dierendonck, 2011). Previous research on servant leadership has reported positive relationships between three of the four follower attitudinal outcomes. Servant leadership characteristics are positively related to follower commitment (Liden, Wayne, Zhao, & Henderson, 2008), follower satisfaction (Barbuto & Wheeler, 2006), and follower engagement (i.e., extra work effort) (Barbuto & Wheeler, 2006). Therefore, it seems that servant leadership will also facilitate the fourth proposed follower attitudinal outcome empowerment (Van Dierendonck, 2011). Building followers' sense of empowerment is a central tenet of servant leadership (Greenleaf, 1977; Smith, Montagno, & Kuzmenko, 2004). Servant leadership creates a work context that may facilitate the development of psychological empowerment.

Hypothesis 7: At the individual level, servant leadership is positively related to individual level employee psychological empowerment.

At the group level, servant leadership may facilitate psychological empowerment above and beyond that of individual level servant leadership. Scholars have proposed that work group leadership may explain between-group variance in psychological empowerment (Seibert, Silver, & Randoph, 2004). Servant leadership has been theorized as occurring at the individual and group levels (Greenleaf, 1977). Empirical research has shown that group level servant leadership is related to commitment to supervisor (Walumbwa, Hartnell, & Oke, 2010), indicating that group level servant leadership may

also facilitate positive follower attitudes, such as empowerment. Servant leaders build a sense of work group cohesion and empowerment (Ehrhart, 2004; Van Dierendonck, 2011). In addition, research today has not yet examined the incremental effect of group level servant leadership. Servant leadership characteristics at the group level will also be positively related to psychological empowerment and explain additional variance in individual-level psychological empowerment above that of individual-level servant leadership characteristics.

> Hypothesis 8: At the group level, servant leader characteristics will have an incremental effect beyond that of the individual level of servant leadership characteristics on employee psychological empowerment.

Servant leadership is also seen as a style of leadership that can bring about the development of followers. Servant leadership is seen as an evolutionary form of leadership, which is in contrast to more popular quick fix leadership styles (Smith, Montagno, & Kuzmenko, 2004; Spears, 1995). Servant leaders build long-term positive relationships with their followers, which leads to the development of their followers (Liden, Wayne, Zhao, & Henderson, 2008). Their followers then have increased capacity, autonomy, and ability, which enable them to instigate positive changes in multiple contexts. Thus, servant leaders are able to make positive changes in the work place through the development of their followers, which leads to greater positive outcomes. Therefore, psychological empowerment will mediate the relationship between servant leadership and proactive work behaviors.

Hypothesis 9: At the individual level, psychological empowerment will mediate the relationship between servant leadership characteristics and the proactive work behaviors of voice, taking charge, individual innovation, and problem prevention.

Hypothesis 10: Psychological empowerment at the individual level will mediate the cross level relationship between group level servant leadership characteristics and individual level proactive work behaviors.

CHAPTER III

This chapter reports the methodology used to study servant leadership, proactive personality, and psychological empowerment as predictors of four proactive work behaviors: problem prevention, individual innovation, voice, and taking charge.

Methodology

This was a cross-sectional multilevel study that had two levels. Level-1 consisted of individual differences in direct reports (Kozlowski & Klein, 2000). In this study, the individual level variables were proactive personality, psychological empowerment, individual's perception of their supervisor's servant leadership characteristics, and the four proactive work behaviors (i.e., problem prevention, innovative ideas, voice, and taking charge). Level-2 contained supervisors' average leadership style (i.e., servant leadership style), and is referred to as the group level (Bliese & Hanges, 2004; Raudenbush & Bryk, 2002; Snijders & Bosker, 1999). Because of the interdependence that exists between direct reports that are led by the same supervisor (Yammarino & Dansereau, 2008), direct reports were considered nested within supervisors (Kozlowski & Klein, 2000).

In this study there were 113 groups (i.e. supervisors), and it was anticipated that servant leadership, aggregated to the group level, would predict some of the group variance in psychological empowerment and proactive work behaviors. Because of the large number of groups, and the desire to predict group variance, a multilevel analysis was used (Snijders & Bosker, 1999).

Participants

Participants for this research study were 410 direct reports (or followers), and 113 supervisors, from three departments within one large public organization (i.e., state government agency) in the United States. The average age was 47 years old. The majority were female (61.2%), and (36.8%) were male. The sample consisted primarily of white (not of Hispanic origin) (91.0%), Hispanic (2.7%), African American (1.7%), Asian (1.7%), American Indian (.5%), and other (.5%) people.

The direct reports also had varying levels of education. The largest percentage had a bachelors degree (28.0%), followed by high school/GED (21.0%), associate degree (17.1%), master degree (15.9%), some graduate work (9.5%), professional degree (MD or JD) (3.7%), and doctoral degree (1.7%). On average, participants had been working for the organization for 13 years (i.e., organizational tenure). The average time direct reports had been in their current position within the organization was 7 years (i.e., job tenure).

Direct reports tended to have the same supervisor for more than one year. In this sample, 6.6% of the direct reports reported that their supervisor had been their leader for less than six months, 6.8% reported that their supervisor had been their leader for 7-12 months, 37.8% reported that their supervisor had been their leader for 1-3 years, 24.9% reported that their supervisor had been their leader for 4-6 years, 9.5% reported that their supervisor had been their leader for 7-10 years, 9.0% reported that their supervisor had been their leader for 11-15 years, and 3.4% reported that their supervisor had been their leader for 21-25 years. In summary, 84.60% reported that their supervisor had been their leader for one year or longer. This organization thus seemed to provide a reasonable sample to test servant leadership, and its theoretical position as a long-term style of

leadership (Smith, Montagno, & Kuzmenko, 2004). Therefore, the extended period of time that direct reports have been associated with their respective supervisors allows direct reports to give an in-depth understanding of their supervisor's servant leader characteristics.

Measures

Four established measures were used to measure the latent variables: psychological empowerment, proactive personality, servant leadership, and proactive work behaviors. In addition, the data came from two sources (i.e., supervisors and direct reports), consequently avoiding the common method bias that is prevalent in most organizational studies (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The independent variables (i.e., servant leadership characteristics of supervisors and proactive personality) were gathered by questioning the direct reports. Direct reports completed items that measured their perception of their supervisor's servant leadership characteristics. Direct reports completed items assessing their proactive personality, and their own motivational state (psychological empowerment). The dependent variable was obtained by asking the supervisors to answer items measuring their perception of their direct reports' proactive work behaviors. The following measures were used.

Servant Leadership

Servant leadership was measured by using the Servant Leadership Questionnaire (Barbuto & Wheeler, 2006). The SLQ consisted of 23 items (see appendix C) reported on a five point Likert-type scale (1 to 5), which measured five dimensions. These items were completed by the direct reports, and measured their perception of their supervisor's servant leadership characteristics. Each of the five dimensions had reliability estimates as

follows: altruistic calling (α = .93), emotional healing (α=.94), wisdom (α = .96), persuasive mapping (α=.91), and organizational stewardship (α = .92). In this study, servant leadership was conceptualized as a higher-order factor, which had a reliability estimate of α=.96.

Servant leader characteristics include both individual and aggregate data (i.e., the mean scores of the 113 supervisors), which means there are two variables for servant leadership. The first variable contains the individual data or servant leader characteristics at level-1. This examines the one-to-one impact leaders have on their direct report or how the individual perceives their supervisor (Yammarino & Dansereau, 2008). The second variable contains aggregated individual data or servant leader characteristics at level-2. This examines the average leadership style of the supervisor or the tendency to exhibit similar servant leader characteristics or behaviors to all of their direct reports (Rousseau, 1985; Yammarino & Dansereau, 2008). This is a group assessment because individual data has been aggregated to measure the shared properties of the group (Kozlowski & Klein, 2000). Hypothesizing servant leadership as a group variable means there is consensus among group members that their supervisor has the tendency to exhibit servant leader characteristics to all of the direct reports.

Psychological Empowerment

Psychological empowerment was measured by using a well established measure (Spreitzer, 1995).This measure included 12 items (see appendix C) reported on a seven point Likert-type scale (1=strongly disagree to 7=strongly agree), which measured four dimensions (i.e., meaning, competence, self-determination, and impact). Reliability estimates for this study were meaning (α = .92), competence (α = .83), self-determination

(α = .88), and impact (α = .92). Example items are: "the work I do is very important to me", "I am self-assured about my capabilities to perform my work activities", "I have mastered the skills necessary for my job" and "I have significant influence over what happens in my department". These items were completed by the direct reports, and measured their own perception of their psychological empowerment. In this study, psychological empowerment was conceptualized as a higher-order factor, which had a reliability of α=.88.

Proactive Personality

Proactive personality was measured by using a shortened version of Bateman and Crant's (1993) measure, which was used by Seibert, Crant, and Kraimer (1999). This shortened version used 10 items (see appendix C) reported on a seven point Likert-type scale (1=strongly disagree to 7=strongly agree). This measure had a reliability of α=.88. These items were also completed by the direct reports. They measured the direct reports' perception of their degree of proactive personality. In this study, proactive personality was conceptualized as a one-dimensional construct.

Proactive Work Behaviors

The four proactive work behaviors were measured by taking items from Parker and Collins' (2010) measure on proactive work behavior. This measure included 13 items (see Appendix D) reported on a five-point Likert-type scale (1=very infrequently to 5=very frequently). The four proactive behaviors had the following reliability: problem prevention (α = .86), individual innovation (α = .85), voice (α = .90), and taking charge (α = .95). These items were completed by the supervisor, and measured the perception the supervisor had that a particular direct report would engage in these four proactive work

behaviors. These thirteen items were completed for two to ten of their direct reports. In this study, the proactive work behaviors were conceptualized as a correlated factor model.

Control Variables

Several key demographic variables were used as control variables: age, time with supervisor, interaction with supervisor, educational level of direct report, job tenure and organizational tenure. First, age was obtained from the personnel department of the public organization. Age was rounded to the nearest year. Second, time with supervisor obtained from the following item: "How long has [supervisor's name] been your supervisor?" Third, interaction with supervisor was measured with the following item: "How often do you interact with [supervisor's name]?" Fourth, educational level was assessed by asking: "What is the highest level of education you have completed?" Fifth, job tenure was obtained from the organization: this consisted of the number of years the employee had been at their current position. Finally, organizational tenure consisted of the number years the employee has been with the organization. This information was also obtained from the organization.

Procedures

The following procedure was used in gathering the data set. First, the approval of the Institutional Review Board (IRB) at the University of Nebraska was sought, and was obtained on January 5, 2011 (see Appendix B for the official letter of approval). After this approval was obtained, organizations were contacted via email, phone, and directly, by the principal investigator. Generally, this required meeting multiple times with an

organization to assess their level of commitment and willingness to partner on this research study.

Approval from one large public organization was obtained. Initial interest was obtained from one key leader in their personnel/human resource department, who saw the potential relevance of the study, and the potential benefit for the organization. This key leader then facilitated setting up meetings with other key leaders within the organization who had the potential power to approve the organization's participation in the study. One-on-one meetings were also arranged to continue to facilitate the approval process. After these multiple meetings and one-on-one sessions, approval was obtained from the public organization.

With the assistances of the personnel/human resource department, the first name, last name, and email addresses for each direct report participant and supervisor were obtained. This included sufficient information to be able to link supervisors with their respective direct reports. An identification number (e.g., 9.15) was assigned to each direct report. The first number identified the group they belonged to, and the second number identified them as a direct report within that group. The identification number allowed for proper identification, linking of the direct report data with the appropriate supervisor, and facilitation of the multilevel sampling procedure used. This identification number also ensured the confidentiality of the individual responses.

An electronic survey was distributed to 1,778 direct reports using the email addresses received from the organization. These direct reports were from a potential 359 different supervisors (i.e., groups). This survey consisted of items measuring their perception of their supervisor's servant leadership characteristics, items measuring their

perception of their own proactive personality, and psychological empowerment. Responses were received from 975 direct reports. For a response rate of 55%.

These responses from the direct reports were organized to examine how many supervisors were rated. Or in other words, how many different supervisors (i.e., groups) these direct reports originated from. If a supervisor had less than two direct reports, they were excluded. To prevent survey fatigue of supervisors, a ceiling of 10 direct reports per supervisor was used. If a supervisor had more than 10 direct reports, random digit numbers were generated to determine which employees would be excluded from this research study.

A secondary electronic survey was then distributed to supervisors asking for their perception of their direct reports' proactive work behavior. This was distributed to 207 supervisors or 58% of the supervisors. Data was obtained from 113 supervisors -a response rate of 55%. Data from the direct reports and supervisors were combined to form a complete data set. This resulted in responses from 410 direct reports, and 113 supervisors.

Chapter IV

Results

This chapter outlines the results obtained after performing both preliminary analyses and multilevel analyses on the data. First, confirmatory factor analysis was used to establish both convergent and discriminant validity. Second the amount of between-group variance in the outcome variables, were calculated. Third, preliminary analyses needed to properly aggregate the servant leader characteristics to the group level were estimated. Finally, a series of multilevel analyses were conducted to examine the proposed relationships between the latent variables.

Preliminary Analyses

The first series of analyses examined the convergent and discriminant validity of the latent factors. The first model estimated was a seven factor measurement model. This model included servant leadership and psychological empowerment as higher order factors, proactive personality as a one dimensional construct, and proactive work behavior (i.e., problem prevention, individual innovation, voice, and taking charge) as a four factor correlated model. Items were used as indicators for each latent factor. The first factor loading of each factor was fixed to one (Kline, 2005). This seven factor model had the following fit statistics: chi-square was χ^2(df=1566) = 3142.72, p<.001; CFI=.93; RMSEA=.05; SRMR=.05. The criterion for good fit followed the recommendations of Hu and Bentler (1999), and was measured by the following standard: a chi square that fails to reject the null hypothesis p > .05; RMSEA< .06, SRMR <.08 and CFI>.95. This model showed excellent fit according to the SRMR and RMSEA index and acceptable fit

according to the CFI. Generally, CFI between .93-.95 are considered acceptable fit (Kline, 2005). This seven factor measurement model is an appropriate representation of the data, and will be used in further analyses.

Convergent validity was evaluated by examining whether each factor loading had a statistically significant loading on its specified latent factor. As shown in Table 3, the factor loadings for all seven factors were significant ($p < .001$) and corresponded to their proposed latent factors. Each of the items loaded significantly onto the latent factor. In addition, each of the loadings for the higher-order factors (i.e., servant leadership and psychological empowerment) loaded significantly onto the higher-order latent factor. The results demonstrate patterns of convergent validity.

To examine discriminant validity, a series of models were estimated, which proposed combining one or more of the seven latent factors from the measurement model. First, a model was estimated that considered the proactive work behaviors as one-dimensional. This was done because of the relatively high correlations (i.e., .17 to .85 with a mean of .38) (see Table 5). This CFA model had the following fit statistics: chi-square was $\chi^2(df=1583) = 4176.60$, $p<.001$; CFI=.88; RMSEA=.06; SRMR=.10. A deviance difference test was conducted between this four factor model and the previous seven factor measurement model. The deviance difference test (17)=1033.87, $p <.001$ showed that this four factor model was significantly worse than the previous seven factor model.

Table 3
Results of Factor Analysis of the Hypothesized Measurement Model

Items	Servant Leadership						Trait
	ALT	EMO	PER	WIS	ORG	SL	TPROA
[Supervisor name] person puts my best interests ahead of his/her own.	.86						
[Supervisor name] does everything he/she can to serve me.	.88						
[Supervisor name] sacrifices his/her own interests to meet my needs.	.88						
[Supervisor name] goes above and beyond the call of duty to meet my needs.	.90						
[Supervisor name] is one I would turn to if I had a personal trauma.		.83					
[Supervisor name] is good at helping me with my emotional issues.		.95					
[Supervisor name] is talented at helping me to heal emotionally.		.96					
[Supervisor name] is one that could help me mend my hard feelings.		.90					
[Supervisor name] always seems alert to what's happening around him/her.			.80				
[Supervisor name] is good at anticipating the consequences of decisions.			.74				
[Supervisor name] has awareness of what's going on around him/her.			.86				
[Supervisor name] seems very in touch with what is happening around him/her.			.90				
[Supervisor name] seems to know what's going on around him/her			.92				
[Supervisor name] offers compelling reasons to get me to do things.				.90			
[Supervisor name] encourages me to dream 'big dream' about the organization.				.81			
[Supervisor name] is very persuasive.				.97			
[Supervisor name] is good at convincing me to do things.				.96			
[Supervisor name] is gifted when it comes to persuading me.				.95			
[Supervisor name] believes that the organization needs to play a moral role in society.					.82		
[Supervisor name] believes that our organization needs to function as a community.					.88		
[Supervisor name] sees the organization for its potential to contribute to society.					.89		
[Supervisor name] encourages me to have a community spirit in the workplace.					.80		
[Supervisor name] is preparing the organization to make a positive difference in the future.					.86		
Altruistic dimension						.86	
Emotional healing dimension						.80	
Persuasive mapping						.84	
Wisdom						.74	
Organizational stewardship						.82	
I am constantly on the lookout for new ways to improve my life.							.55
Wherever I have been, I have been a powerful force for constructive change.							.62
Nothing is more exciting than seeing my ideas turn into reality.							.61
If I see something I don't like, I fix it.							.60
No matter what the odds, if I believe in something I will make it happen.							.72
I love being a champion for my ideas, even against others' opposition.							.69
I excel at identifying opportunities.							.82
I am always looking for better ways to do things.							.59
If I believe in an idea, no obstacle will prevent me from making it happen.							.71
I can spot a good opportunity long before others can.							.65

Table 3
Results of Factor Analysis of the Hypothesized Measurement Model
(continued)

Items	Psychological Empowerment					Proactive Work Behaviors			
	MEA	COM	SEL	IMP	EMP	PRE	INN	VOC	TAK
The work I do is very important to me.	.80								
My job activities are personally meaningful to me.	.94								
The work I do is meaningful to me.	.95								
I am confident about my ability to do my job.		.85							
I am self-assured about my capabilities to perform my work activities.		.92							
I have mastered the skills necessary for my job.		.62							
I have significant autonomy in determining how I do my job.			.75						
I can decide on my own how to go about doing my work.			.91						
I have considerable opportunity for independence and freedom in how I do my job.			.89						
My impact on what happens in my department is large.				.79					
I have a great deal of control over what happens in my department.				.97					
I have significant influence over what happens in my department.				.96					
Meaning dimension of empowerment					.51				
Competence dimension of empowerment					.43				
Self-determination of empowerment					.74				
Impact dimension of empowerment					.77				
How frequently does [direct report name] try to develop procedures and systems that are effective in the long term, even if they slow things down to begin with?						.85			
How frequently does [direct report name] try to find the root cause of things that go wrong?						.78			
How frequently does [direct report name] spend time planning how to prevent reoccurring problems?						.84			
How frequently does [direct report name] generate creative ideas?							.85		
How frequently does [direct report name] search out new techniques, technologies and/or product ideas							.79		
How frequently does [direct report name] promote and champion ideas to others?							.79		
How frequently does [direct report name] communicate their views about work issues to others in the workplace, even if their views differ and others disagree with them?								.70	
How frequently does [direct report name] speak up and encourage others in the workplace to get involved with issues that affect them?								.72	
How frequently does [direct report name] keep well informed about issues where their opinion might be useful to their workplace?								.80	
How frequently does this person speak up with new ideas or changes in procedures?								.88	
How frequently does [direct report name] try to bring about improved procedures in their workplace?									.90
How frequently does [direct report name] try to institute new work methods that are more effective?									.87
How frequently does [direct report name] try to implement solutions to pressing organization problems?									.82

ALT=Altruistic calling; EMO=Emotional healing; PER=Persuasive mapping; WIS=Wisdom; ORG=Organizational stewardship; SL=Servant leadership; TPROA=Proactive personality; MEA=Meaning; COM=Competence; SEL=Self-determination; IMP=Impact; EMP=Empowerment; PRE=Problem prevention; INN=Individual innovation; VOC=Voice; TAK=Taking charge. n=410 *all factor loading are significant at p<.001.

An additional four models were estimated, each combining varying latent factors. Deviance difference tests were calculated to compare each additional model to the proposed seven factor measurement model. Each model was significantly worse than the proposed seven factor measurement model (see Table 4). Examination of the six contradicting models with the seven factor measurement model showed that each alternative model was found to be significantly worse than the seven factor measurement model, which indicates that the seven latent constructs are distinct.

Table 4
Results for Discriminant Validity Analyses

Model	$\chi^2(df)$	$\Delta\chi^2(\Delta df)^a$	CFI	RMSEA	SRMR
7-factor (Measurement Model)	3142.72(1566)	-	.93	.05	.05
6-factor (SL+EMP)	10486.89(1583)	6310.30(17)*	.57	.12	.12
6-factor (EMP+TPROA)	7097.99(1579)	3955.27(13)*	.73	.09	.11
5- factor (SL+EMP+TPROA)	1177.96(1588)	8628.23(22)*	.53	.51	.11
4-factor (PREV+INN+VOC+TAK)	4176.60(1583)	1033.87(17)*	.88	.06	.10
2-factor (SL+EMP+TPROA) and (PREV+INN+VOC+TAK)	11889(1596)	8746.71(30)*	.50	.13	.13

CFI=comparative fit index; SRMR=standardized root-mean square residual; RMSEA=root-mean-square error of approximation
SL=Servant leadership; EMP=Psychological empowerment; TPROA=Proactive personality; PREV=Problem prevention; INN=Individual innovation; VOC=Voice; TAK=Taking charge
[a] All alternative models are compared to the 7-factor model.
n=410. *p<.001.

Table 5
Intercorrelations and Reliabilities of Latent Factors

		1	2	3	4	5	6	7	8
1	Servant Leader Characteristics (Level-1)	(.96)							
2	Servant Leader Characteristics (Level-2)	.64	(.42)						
3	Proactive Personality	.28	.17	(.88)					
4	Psychological Empowerment	.55	.35	.39	(.88)				
5	Problem Prevention	.31	.26	.17	.30	(.86)			
6	Individual innovation	.23	.17	.22	.25	.76	(.85)		
7	Voice	.21	.18	.20	.22	.72	.79	(.86)	
8	Taking Charge	.26	.19	.20	.29	.82	.85	.79	(.90)

n=410; all correlations are significant at $p<.001$

The amount of between-group variance (i.e. level-2 variance) in the four proactive work behaviors, and in the potential mediating variable of psychological empowerment was explored next by comparing different types of unconditional means models. The first unconditional model contained a random intercept variance term for supervisors, whereas the second unconditional model did not. These models were compared using chi-squared difference tests.

1. *Psychological Empowerment.* Comparison of an unconditional random intercept model, with a second unconditional model, resulted in a significant improvement in model fit, REML deviance difference χ^2(df=1) = 11.69, p < .001, ICC(1) =.1421, or 14.21% of the variance in psychological empowerment can be contributed to group membership.
2. *Problem Prevention.* Comparison of unconditional random intercept model with a second unconditional model, resulted in a significant improvement in model fit, REML deviance difference χ^2(df=1) =38.16, p < .001, ICC(1) =.2744, or 27.44% of the variance in problem prevention can be attributed to group membership.
3. *Individual innovation.* Comparison of unconditional random intercept model with a second unconditional model, resulted in a significant improvement in model fit, REML deviance difference χ^2(df=1) = 27.81, p < .001, ICC(1) =.2238, or 22.38% of the variance in individual innovation can be attributed to group membership.
4. *Voice.* Comparison of unconditional random intercept model with a second unconditional model, resulted in a significant improvement in model fit, REML deviance difference χ^2(df=1) =21.35, p < .001, ICC(1) =.1830, or 18.30% of the variance in voice can be attributed to group membership.
5. *Taking Charge.* Comparison of unconditional random intercept model with a second unconditional model, resulted in a improvement in model fit, REML deviance difference χ^2(df=1) = 24.43, p < .001, ICC(1) =.2184, or 21.84% of the variance in taking charge can be attributed to group membership.

The comparisons resulted in a significant improvement in model fit for each of the four proactive work behavior variables and for psychological empowerment, indicating that the direct reports did vary significantly in each of the outcomes according to the group they were in. Level-2 predictors were then investigated, which opened the way for servant leadership conceptualized at the group level to predict some of the

variance of psychological empowerment, and variance in the four proactive work behaviors. The significant ICC(1) also illustrated the need for a multilevel analysis because of percentage of variance in the four outcomes that can be attributed to belonging to a specific group.

To investigate the plausibility of aggregating servant leadership to the group-level, the ICC(1), ICC(2) (Bliese, 2000) and $r_{wg(j)}$ (James, Demaree, & Wolf, 1984) for servant leadership were estimated. Significant between-group variance was found for servant leader characteristic [$F(112,282) = 1.73$, $p < .001$. The ICC(1)= .17; ICC(2)= .42, and median $r_{wg(j)}$ value was .89.

In summary, $r_{wg(j)}$ of .89 indicates high consensus (i.e., interrater agreement) among direct reports on the servant leadership characteristics of their immediate supervisor. The significant ICC(1) indicates there are between-group differences on the perceptions of supervisor's servant leadership characteristics (Liden, Wayne, Zhao, & Henderson, 2008). The lower ICC(2) indicates that the group mean reliability of the groups was low. This could be due to the relatively smaller number of direct reports per group (average number of direct reports per group was 4.5) (Bliese & Hanges, 2004; Snijders & Bosker, 1999). Following the procedure of similar research on servant leadership, the lower group mean reliability is acknowledged, and aggregated to the group-level (Liden, Wayne, Zhao, & Henderson, 2008).

Multilevel Analyses

A series of models were estimated that examined proactive personality, servant leader characteristics as predictors of psychological empowerment and the four proactive work behaviors. This was followed by a series of models that examined all predictors

simultaneous. The recent recommendation to grand-mean center when considering cross-level models was followed (Enders & Tofighi, 2007). In addition, age, length of time the supervisor had been a direct report's leader, number of interactions the direct report had with their immediate supervisor, educational level, job tenure, and organizational tenure (see model 1 in Tables 6-10) were used as control variables.

Hypothesis one was tested by running a series of models with the four proactive work behaviors as the outcome variable, and proactive personality as the independent variable. First, proactive personality was used as a predictor of problem prevention. To add this predictor to the model, proactive personality was grand mean centered at 5.26. When proactive personality was added to the model it was found to be significant ($p<.001$). This means that for every additional unit of proactive personality an individual has above 5.26, their level of problem prevention goes up by .20 (see model 2 in Table 6). Direct reports that had higher levels of proactive personality also seemed to have high levels of problem prevention. Proactive personality explained 1.81% of the residual variance in problem prevention (see model 2 in Table 6) beyond that of the control variables. The control variables alone explained 6.67% of the variance in problem prevention (see model 1 in Table 6).

Table 6
Multilevel Modeling for Problem Prevention

Variable	Problem Prevention						
	1	2	3	4	5	6	7
Intercept	2.39	2.28	2.56	2.52	2.83	2.07	2.81
Individual Differences (Level-1)							
Age	-.01*	-.01*	-.01*	-.01**	-.01**	-.01*	-.01**
Time w/ supervisor	-.00	.00	-.02	-.02	.00	-.00	-.01
Interaction w/ supervisor	.18*	.19**	.15*	.15*	.09	.09	.10
Education level	.06*	.06	.08	.08**	.07	.07*	.08**
Job Tenure	-.01	-.00	-.01	-.01	-.01	-.00	-.01
Org. Tenure	.01	.01	.01	.01	.01	.01	.01
Proactive Personality		.20***		.05	.11	.11	.04
Empowerment			.32***	.30***			.21**
Servant Leadership					.30***	.24***	.20**
Contextual Diffeneces (Level-2)							
Servant Leadership						.23	
Random Effects							
$\sigma^{2\,a}$	.69	.67	.63	.63	.65	.65	.63
$\tau_{00}{}^{b}$	.28	.26	.24	.24	.20	.21	.21
$R^{2\,c}$	6.67	8.36	13.74	13.53	11.36	11.80	13.65

n=410 (Level-1, direct reports); n=113 (Level-2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model.

Second, proactive personality was used as a predictor of individual innovation and found to be significant (p<.001). For every additional unit of proactive personality an individual had above 5.26, their level of individual innovation goes up by .26 (see model 2 in Table 7). Those direct reports who had higher overall levels of initial proactive personality also had more individual innovation. Proactive personality explained 5.06% of the residual variance in individual innovation (see model 2 in Table 7) beyond that of the control variables. The control variables alone explained 10.47 % of the variance in individual innovation (see model 1 in Table 7).

Table 7
Multilevel Modeling for Individual Innovation

Variable	Individual innovation						
	1	2	3	4	5	6	7
Intercept	2.45	2.34	2.62	2.53	2.70	2.26	2.69
Individual Differences (Level-1)							
Age	-.01**	-.01**	-.01**	-.01**	-.01**	-.01**	-.01**
Time w/ supervisor	-.03	-.02	-.05	-.03	-.00	-.03	-.03
Interaction w/ supervisor	.11	.14*	.09	.10	.07	.07	.07
Education level	.11***	.10***	.12***	.12***	.11***	.11***	.12***
Job Tenure	-.01	-.01	.00	-.01	-.01	-.01	-.01
Org. Tenure	.00	.00	.00	.00	.00	.00	.00
Proactive Personality		.26***		.14*	.20**	.16*	.14*
Empowerment			.27***	.22***			.16**
Servant Leadership					.20**	.17*	.12
Contextual Diffeneces (Level-2)							
Servant Leadership						.13	
Random Effects							
$\sigma^{2\,a}$	.63	.60	.59	.58	.59	.20	.58
$\tau_{00}{}^{b}$	.23	.23	.20	.20	.20	.59	.19
$R^{2\,c}$	10.47	15.00	15.58	17.03	16.07	16.14	16.96

n=410 (Level-1, direct reports); n=113 (Level-2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model.

Third, proactive personality was used as a predictor of voice, and found to be significant (p<.001). For every additional unit of proactive personality an individual has above 5.26, their level of voice goes up by .21 (see model 2 in Table 8). Those direct reports who had higher overall levels of initial proactive personality also seemed to have high levels of voice. Proactive personality explained 2.50% of the residual variance in voice (see model 2 in Table 8) beyond that of the control variables.

Table 8
Multilevel Modeling for Voice

Variable	Voice						
	1	2	3	4	5	6	7
Intercept	2.97	2.88	3.10	3.01	3.18	2.69	3.17
Individual Differences (Level-1)							
Age	-.00	-.00	-.01	-.00	-.00	-.00	-.00
Time w/ supervisor	-.00	-.01	-.03	-.00	.00	-.01	-.00
Interaction w/ supervisor	.07	.07	.01	.06	.03	.03	.03
Education level	.08*	.07**	.09*	.08**	.08**	.08**	.08*
Job Tenure	-.00	-.00	-.00	-.00	-.00	-.00	-.00
Org. Tenure	.00	.00	.00	.00	.00	.00	.00
Proactive Personality		.21***	.	.12**	.15**	.15**	.11*
Empowerment			.21***	.17**			.11
Servant Leadership					.16**	.12*	.11
Contextual Diffeneces (Level-2)							
Servant Leadership						.15	
Random Effects							
$\sigma^{2\,a}$	.58	.56	.56	.55	.56	.56	.55
$\tau_{00}{}^{b}$	.14	.13	.12	.12	.11	.11	.11
$R^{2\,c}$	1.36	3.82	2.22	5.40	4.48	4.48	4.96

n=410 (Level-1, direct reports); n=113 (Level-2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model.

Finally, proactive personality was used as a predictor of taking charge, and found to be significant (p<.001). For every additional unit of proactive personality an individual had above 5.26, their level of taking charge goes up by .24 (see model 2 in Table 9). Those direct reports that had higher levels of proactive personality also seemed to have high levels of taking charge. Proactive personality explained 4.02% of the residual variance in taking charge (see model 2 in Table 9) beyond that of the control variables. The control variables alone explained 11.19% of the variance in taking charge. As

hypothesized, proactive personality significantly predicted each of the four proactive work behaviors. Hypothesis one was supported.

Table 9
Multilevel Modeling for Taking Charge

Variable	Taking Charge						
	1	2	3	4	5	6	7
Intercept	1.88	1.76	2.06	1.99	2.21	1.68	2.18
Individual Differences (Level-1)							
Age	-.01***	-.01**	-.01***	-.01***	-.01***	-.01***	-.01***
Time w/ supervisor	.00	.01	.01	.00	.01	.01	.01
Interaction w/ supervisor	.20*	.22*	.16*	.17*	.13	.13	.14*
Education level	.12***	.12***	.13***	.13***	.11***	.11***	.13***
Job Tenure	-.00	-.01	-.00	-.00	-.00	-.00	-.01
Org. Tenure	.00	.00	.00	.00	.00	.00	.00
Proactive Personality		.24***		.10	17*	.17**	.10
Empowerment			.32***	.29***			.22***
Servant Leadership					.24***	.20**	.13*
Contextual Diffeneces (Level-2)							
Servant Leadership						.16	
Random Effects							
$\sigma^{2\,a}$	.66	.64	.61	.61	.63	.62	.61
$\tau_{00}{}^{b}$	.22	.22	.18	.19	.19	.19	.18
$R^{2\,c}$	11.19	14.76	18.21	18.81	16.98	17.13	18.78

n=410 (Level-1, direct reports); n=113 (Level-2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model.

Hypothesis two was tested by estimating a series of models with the four proactive work behaviors as the outcome variable, and psychological empowerment as the only independent variable. Psychological empowerment was entered as a predictor for problem prevention, individual innovation, voice, and taking charge. As hypothesized, psychological empowerment was significantly related to each of the four proactive work

behaviors (see model 3 in Table 6, 7, 8, 9). For each additional unit of psychological empowerment an individual has above 5.46, their level of problem prevention goes up by .32, level of individual innovation goes up by .27, level of voice goes up .21, and level of taking charge goes up by .32 (see model 3 in Table 6-9). Psychological empowerment explained an additional 7.58% of the variance in problem prevention, 5.71% of the variance in individual innovation, 2.88% of the variance in voice, and 7.90% of the variance in taking charge beyond that of the control variables. In conclusion, as hypothesized, psychological empowerment was significantly related to each of the four proactive work behaviors. Hypothesis two was supported.

Hypothesis three was tested by estimating a model with proactive personality as a predictor of psychological empowerment. This relationship was found to be significant ($p < .001$). For each additional unit of proactive personality an individual has above 5.26, their level of psychological empowerment goes up by .51. Proactive personality explained 19.64% of the residual variance in psychological empowerment (see model 2 in Table 10) beyond that of the control variables. Hypothesis three was supported.

Table 10
Multilevel Modeling for Psychological Empowerment

Variable	Psychological Empowerment			
	1	2	3	4
Intercept (γ_{00})	4.93	4.70	5.59	5.85
Individual Differences (Level-1)				
Age	.00	.00	.00	.00
Time w/ supervisor	.03	.05	.05	.05
Interaction w/ supervisor	.10	.13*	-.03	-.03
Education level	-.03	-.04	-.04	-.04
Job Tenure	-.00	-.00	.00	-.00
Org. Tenure	.00	.00	.01*	.01*
Proactive Personality		.51***	.35***	.35**
Servant Leadership			.50***	.52***
Contextual Diffeneces (Level-2)				
Servant Leadership				-.07
Random Effects				
$\sigma^{2\,a}$	.68	.54	.40	.40
$\tau_{00}{}^{b}$	.10	.09	.08	.08
$R^{2\,c}$	.00	19.64	39.85	39.88

n=410 (Level-1, direct reports); n=113 (Level-2, leaders); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model.

Hypothesis four focused on the mediating effect that psychological empowerment had on the relationship between proactive personality and the four proactive work behaviors. It was hypothesized that psychological empowerment could help explain the significant relationship between proactive personality and the four proactive work behaviors. Scholars have recognized three types of meditational inferences: full mediation, partial mediation, and indirect effects (Mathieu & Taylor, 2006). These three types of mediating inferences are briefly explained below.

According to Mathieu and Taylor (2006) full mediation occurs whenever the mediating variable (M) accounts for the relationship between the independent variable

(X) and the dependent variable (Y). This means the X→Y relationship is no longer significant, only the M→Y relationship is significant. This is tested by adding the independent variable and the mediating variable as simultaneous predictors of the dependent variable. Partial mediation is when the mediating variable accounts for some of the X→Y relationship, but the X→Y is still significant when the independent and mediating variables are entered simultaneously. Partial mediation also requires a significant M→Y. Finally, an indirect effect only requires a significant X→M relationship, and a significant M→Y relationship. To test meditational relationship, researchers typically examine the X→Y, then the M→Y relationship, then the X→M relationships, and finally the X→M→Y relationship with both the independent and mediating variables entered simultaneously.

In this study, the relationship between proactive personality and the four proactive work behaviors was tested (i.e., the X→Y). This was completed for hypothesis one and results indicated that proactive personality was significantly related to problem prevention, individual innovation, voice, and taking charge (see model 2 in Tables 6-9). Second, the relationship between the mediating variable and the four proactive work behaviors was tested (i.e., M→Y) in hypothesis two. Psychological empowerment was significantly related to each of the four positive work behaviors (see model 3 in Tables 6-9). Third, the relationship between proactive personality and the mediating variable (i.e., psychological empowerment) was examined (i.e., X→M) in hypothesis three, and found to be significant. Proactive personality was significantly related to psychological empowerment (see model 2 in Table 10).

Finally, the independent variable (i.e., proactive personality), and the mediating variable (psychological empowerment) were entered simultaneously into the model. This resulted in psychological empowerment significantly predicting ($p<.001$) problem prevention, while proactive personality was no longer significant (see model 4 in Table 6). This resulted in psychological empowerment fully mediating the relationship between proactive personality and problem prevention (Mathieu & Taylor, 2006). This model explained 13.53% of the variance in problem prevention. Psychological empowerment also fully mediated the relationship between proactive personality and taking charge. This explained 18.81% of the variance in taking charge.

Psychological empowerment also partially mediated the relationship between proactive personality and individual innovation and the relationship between proactive personality and voice (see model 4 in Tables 7 and 9). When psychological empowerment was entered simultaneously with proactive personality, proactive personality was a significant predictors of individual innovation and voice ($p<.001$). Although this relationship was decreased (compare models 2 and 4 in Table 8). Psychological empowerment and proactive personality explained 17.03% of the variance in individual innovation, and 5.02% of the variance in voice.

In summary, psychological empowerment fully mediated the relationship between proactive personality and problem prevention, and the relationship between proactive personality and taking charge. Psychological empowerment was a partial mediator of the relationship between proactive personality and individual innovation, and the relationship between proactive personality and voice. Hypothesis four was supported.

Hypothesis five examined servant leader characteristics as a level-1 predictor of each of the four proactive work behaviors. To add this predictor to the model, servant leader characteristics at level-1 were grand mean centered at 3.38. Servant leader characteristics at level-1 was added to the model, along with proactive personality, and found to be significantly related to problem prevention ($\gamma_{09} = .30$, p< .001), individual innovation ($\gamma_{09} = .20$, p < .01), voice ($\gamma_{09} = .16$, p< .01), and taking charge ($\gamma_{09} = .24$, p < .001) (see model 5 in Tables 6-9). Hypothesis five was supported.

Hypothesis six examined if servant leader characteristics at the group level would have an incremental effect above and beyond that of the individual level. Results showed that servant leader characteristics at the group level, was not significant (problem prevention p>.06; individual innovation p>.27; voice p>.17; taking charge p>.19) in predicting each of the four proactive work behaviors. Proactive personality significantly predicted individual innovation (p<.01), voice (p <.01), and taking charge (p<.01). Servant leader characteristics at level-1 was significantly related to problem prevention (p <.0001), individual innovation (p<.05), voice (p<.05), and taking charge (p<.01). Hypothesis six was not supported.

Hypothesis seven examined if servant leadership characteristics at level-1 was a significant predictor of psychological empowerment. To evaluate this hypothesis, proactive personality and servant leader characteristics at level-1 were entered in the model as predictors of psychological empowerment. This resulted in servant leader characteristics at level-1 as being significantly related (p<.001) to psychological empowerment. Servant leader characteristics at level-1 explained an additional 25.16% of the residual variance beyond that of the control variables and proactive personality (see

model 3 in Table 10). Direct reports who perceived their supervisor as having higher levels of servant leader characteristics also had higher levels of psychological empowerment. Hypothesis 7 was supported.

Hypothesis eight examined the incremental effect of servant leader characteristics at the group level beyond that of servant leader characteristics at level-1. Results showed that servant leader characteristics, at the group level, was non-significant ($p>.39$). Hypothesis 8 was not supported. Belonging to a group that had a supervisor who displayed an average leadership style of servant leadership was not positively related to psychological empowerment (see model 4 in Table 10). Proactive personality ($p< .01$) and servant leader characteristics ($p<.001$) at the individual level were significant.

Hypothesis nine examined the mediating effect of psychological empowerment on the relationship between the independent variables from level-1 (i.e., proactive personality and servant leader characteristics) and the four proactive work behaviors. Unlike hypothesis four, this hypothesis examined if psychological empowerment would mediate when there are two independent variables (i.e., proactive personality and servant leader characteristics) at level-1.

The procedures outlined by Mathieu and Taylor (2007) were followed to examine the mediating impact of psychological empowerment. First, models were estimated that included both independent variables (i.e., proactive personality and servant leader characteristics at level-1) entered simultaneously as predictors of psychological empowerment, and each of the four proactive work behaviors. Next, a model was estimated that examined the impact of the mediating variable (i.e., psychological empowerment on the four proactive work behaviors). Finally, a model was estimated that

included the two independent variables, and the mediating variable. Each of the four proactive variables will be considered separately starting with problem prevention.

First, the X→Y relationship was examined by using results from models used to answer hypothesis five (see models 5 in Tables 6-9). These results showed that servant leadership characteristics at level-1 significantly predicted problem prevention, individual innovation, voice, and taking charge (see model 5 in tables 6-9). Proactive personality was not significantly related to problem prevention (see model 5 in Tables 6). This means that psychological empowerment can only have an indirect effect on the relationship between proactive personality and problem prevention (Mathieu & Taylor, 2006). However, proactive personality was significantly related to individual innovation, voice, and taking charge (see model 5 in Tables 8 and 9). Following the possible conclusion outlined by Mathieu and Taylor (2006), psychological empowerment may act as a partial or full mediating variable for the relationship between servant leadership at level-1 and individual innovation, voice, and taking charge. However, because of the non-significant relationship between proactive personality and problem prevention, psychological empowerment can only be considered as having an indirect effect on the relationship between proactive personality and problem prevention (Mathieu & Taylor, 2006)..

Second, the M→Y relationship was examined. This was done by reviewing results that were used to report hypothesis 2 (see model 3 in Table 6-9). These results showed that psychological empowerment significantly predicted each of the four proactive work behaviors (i.e., problem prevention, individual innovation, voice, and taking charge). The plausibility of psychological empowerment having a mediating influence at level-1 may continue to be examined (Mathieu & Taylor, 2006).

Third, the X→M relationship was examined. This was done by revisiting results from hypothesis 7 (see model 3 in Table 10). Results showed that proactive personality and servant leadership both significantly predicted psychological empowerment. Again, the conditions continue to be met for further evaluation of the mediating impact of psychological empowerment (Mathieu & Taylor, 2006).

Fourth, the X→M→Y relationship was examined by adding the two predictor variables (i.e., proactive personality and servant leader characteristic at level-1) and the mediating variable (i.e., psychological empowerment) simultaneously into the same model (see model 7 in Table 6-9). This resulted in servant leadership significantly predicting problem prevention ($p<.01$). This means that psychological empowerment partial mediates the relationship between servant leader characteristics at level-1 and problem prevention. Results also showed that proactive personality was non-significantly related. The previous non-significant relationship between proactive personality and problem prevention (see model 5 in Table 6) prevents psychological empowerment to be considered as a full or partial mediating variable (Mathieu & Taylor, 2006). However, the significant relationship between proactive personality and empowerment (see model 3 in Table 10), and the significant relationship between psychological empowerment and problem prevention (see model 3 in Table 6) allows for an indirect effect. This means that proactive personality has an indirect effect on problem prevention via psychological empowerment (Mathieu & Taylor, 2006). .

Next, the proactive work behavior of individual innovation was considered. First, the X→Y relationship was examined. Servant leader characteristics at level-1 were positively related to individual innovation (see model 5 in Table 7). Proactive personality

was also significantly ($p<.01$) related. Second, the M→Y relationship was found to be significant (see model 3 in Tables 6-9). Third, both independent variables significantly predicted psychological empowerment (i.e., X→Y; see model 3 in Table 10). Finally, a new model was estimated which contained both independent variables, and the mediating variable simultaneously (see model 7 in Tables 6-9). This resulted in psychological empowerment fully mediating the relationship between servant leader characteristics and individual innovation. This conclusion was obtained because servant leader characteristics at level-1, was no longer a significant predictor of individual innovation with the mediator variable added to the model (Mathieu & Taylor, 2006). Psychological empowerment partially mediated the relationship between proactive personality and individual innovation.

The mediating impact of psychological empowerment on voice was examined next. First, the X→Y relationship was examined by looking at model 5 for Table 8. This showed that proactive personality and servant leader characteristics at level-1 were both significant predictors of voice. Because this relationship was significant, psychological empowerment can be further investigated as a partial or full mediator (Mathieu & Taylor, 2006). Second, the M→Y has previously been established as significant (see model 3 in Table 8). Third, the X→M relationship was also reported as significant (see model 3 in Table 10). Finally, a model was estimated with proactive personality, servant leader characteristics at level-1, and psychological empowerment entered simultaneously. This resulted in servant leadership ($p>.07$) and psychological empowerment ($p>.06$) being non-significant, while proactive personality was significant ($p<.05$) (see model 6 in Table

8). This means that servant leader characteristics at level-1 had an indirect effect on voice, via psychological empowerment. Proactive personality had a direct effect on voice.

Finally, taking charge was considered. As established previously (see model 5 in Table 9), both servant leader characteristics at level-1, and proactive personality were significant predictors of taking charge. They were also significant predictors of psychological empowerment (see model 3 in Table 10). Psychological empowerment was a significant predictor of taking charge (see model 3 in Table 9). The fourth criteria for mediation was examined by estimating a new model with servant leader characteristics at level-1, psychological empowerment, and proactive personality entered simultaneously into a model. This resulted in servant leader characteristics and psychological empowerment significantly predicting taking charge (see model 7 in Table 9). This means that psychological empowerment partial mediated the relationship between servant leader characteristics and taking charge. Proactive personality was found to be non-significant, which means that psychological empowerment fully mediated the relationship between proactive personality and taking charge (Mathieu & Taylor, 2006).

In summary, psychological empowerment partially mediated the relationship between servant leader characteristics at level-1 and problem prevention, and taking charge. It was also a full mediator for the relationship between servant leader characteristics at level-1 and individual innovation. Psychological empowerment was not a mediator between servant leader characteristics at level-1 and the proactive behavior of voice. Servant leader characteristics at level-1 had an indirect effect on voice, via psychological empowerment. Finally, the relationship between proactive behavior and the four proactive work behaviors was partially mediated by psychological empowerment

for the behavior of individual innovation. Proactive personality had an indirect effect on problem prevention, via psychological empowerment. Proactive personality had a direct effect on voice. The relationship between proactive personality and taking charge was fully mediated by psychological empowerment. Hypothesis nine was partially supported.

Hypothesis ten examined if psychological empowerment would also mediate the relationship between servant leader characteristics at level-2 and each of the four proactive work behaviors. Previous results from hypothesis six showed servant leader characteristics at level-2 were not significantly related to the four proactive work behaviors (see model 6 in Table 6-9). This means that the direct X→Y relationship between servant leadership at level-2 and the individual level proactive work behaviors was not supported. In addition, previous results showed that servant leader characteristics aggregated to level-2 did not predict psychological empowerment (see model 4 in Table 10). Research did show a significant relationship between psychological empowerment and each of the four proactive work behaviors (see model 3 in Tables 6-9). According to Mathieu and Taylor (2006; 2007) the necessary relationships were not found to further explore psychological empowerment as a full or partial mediator. Also, servant leader characteristics aggregated to the group level cannot be examined as having an indirect effect because it was not significantly related to psychological empowerment (Mathieu & Taylor, 2006). Hypothesis ten was not supported. A summary of hypothesized findings are included in Table 11 below.

Table 11
Summary of Hypothesized Findings

	Independent Variables	Mediating Variable	Dependent Variables	Conclusion
Hypothesis 1	Proactive		Problem Prevention	Supported
	Proactive		Individual innovation	Supported
	Proactive		Voice	Supported
	Proactive		Taking Charge	Supported
Hypothesis 2	Empower		Problem Prevention	Supported
	Empower		Individual innovation	Supported
	Empower		Voice	Supported
	Empower		Taking Charge	Supported
Hypothesis 3	Proactive		Empower	Supported
Hypothesis 4	Proactive	Empower	Problem Prevention	Full
	Proactive	Empower	Individual innovation	Part
	Proactive	Empower	Voice	Part
	Proactive	Empower	Taking Charge	Full
Hypothesis 5	SL (level-1)		Problem Prevention	Supported
	SL (level-1)		Individual innovation	Supported
	SL (level-1)		Voice	Supported
	SL (level-1)		Taking Charge	Supported
Hypothesis 6	SL (level-2)		Problem Prevention	NS
	SL (level-2)		Individual innovation	NS
	SL (level-2)		Voice	NS
	SL (level-2)		Taking Charge	NS
Hypothesis 7	SL (level-1)		Empower	Supported
Hypothesis 8	SL (level-2)		Empower	NS
Hypothesis 9	Proactive and SL(level-1)	Empower	Problem Prevention	Part=SL Indirect=PP
	Proactive and SL(level-1)	Empower	Individual innovation	Part=PP Full=SL
	Proactive and SL(level-1)	Empower	Voice	Indirect=SL Direct=PP
	Proactive and SL(level-1)	Empower	Taking Charge	Part=SL Full= PP
Hypothesis 10	SL (level-2)	Empower	Problem Prevention	NS
	SL (level-2)	Empower	Individual innovation	NS
	SL (level-2)	Empower	Voice	NS
	SL (level-2)	Empower	Taking Charge	NS

SL (level-1) or SL= servant leader characteristics at level-1; SL (level-2)= servant leader characteristics at level -2; proactive or PP=proactive personality; Empower=Psychological Empowerment; NS=Not Supported

CHAPTER V

Discussion

This research study explored individual and contextual differences as antecedents to four proactive work behaviors, and the mediating impact psychological empowerment may have on these relationships. Proactive personality and servant leader characteristics (level-1 and level-2) were examined as possible antecedents. Psychological empowerment was examined as a mediating variable for both levels. This chapter will discuss the findings, the strengths and limitations of the study, give some recommendations for future research, and end with some implications for practice.

Proactive Personality

Overall examination of the findings showed that proactive personality was positively related to proactive work behaviors. These findings are similar to previous research that has also shown proactive personality as having a direct positive relationship with each of the four positive work behaviors (Griffin, Neal, & Parker, 2007; Parker & Collins, 2010). However, when servant leader characteristics at level-1 were added to the model, proactive personality was no longer related to problem prevention.

Individuals with a proactive personality have a perception that they can make a difference, and be active participants in their work role. Individuals with a proactive personality tend to seek out information, opportunities, and solutions to work problems (Crant, 2000). In this study, employees' proactive personality was positively related to individual innovation, voice, and taking charge. One implication for practitioners is to hire individuals with a proactive personality, if they desire to have a proactive work

force. These results give sufficient support for hypothesis one, and provide the basis to examine more complicated mediating models that will be discussed below.

This study also examined proactive personality as an antecedent to psychological empowerment. Results showed that proactive personality was positively related psychological empowerment. Individuals that had higher proactive personality also had higher levels of psychological empowerment. This result is consistent with previous research that has also shown a positive relationship with other personality antecedents (Spreitzer, 1995). It is also consistent with the conceptualization of proactive personality. Scholars have proposed that individuals with a proactive personality are motivated to improve, seek out opportunities, and facilitate change (Crant, 2000). Psychological empowerment seems like a plausible result and proposed relationships were supported in this study.

This study also explored the process by which proactive personality and the four proactive behaviors were positively related. Scholars have previously suggested that motivational cognitive states may mediate this relationship (Parker, Williams, & Turner, 2006; Thompson, 2005). This study examined if psychological empowerment may be one motivational state that could help explain this positive relationship. Results showed that psychological empowerment fully mediated one of the four proactive work behaviors (i.e., taking charge). Psychological empowerment partially mediated the relationship between proactive personality and individual innovation. Proactive personality was indirectly related to problem prevention and directly related to voice. These results indicate that it is generally through a cognitive motivational state (i.e., psychological empowerment) that individuals with a proactive personality are positively related to

proactive work behaviors. One implication is if organizations desire to have a proactive work force they must hire individuals with a proactive personality, but they must also ensure that their organizational culture, job descriptions, and policies all facilitate positive cognitive motivational states.

Psychological Empowerment

Psychological empowerment is conceptualized as a motivational construct that "reflects an active, rather than a passive, orientation to a work role" (Spreitzer, 1995, p. 1444). It seems likely that a consequence of psychological empowerment would be direct reports who are engaged in enhancing their work role through participating in proactive work behaviors. Results from this study strongly supported this notion. Psychological empowerment was positively related to problem prevention, individual innovation, voice, and taking charge. Psychological empowerment explained the most variance in each of the four proactive behaviors when compared to proactive personality, and the contextual variable of servant leadership style. Previous research had reported positive relationships between psychological empowerment and employee innovation (Pieterse, Knippenberg, Chippers, & Stam, 2010), but had not examined psychological empowerment as an antecedent to each of the four proactive work behaviors.

The results from this study showed that direct reports with higher levels of psychological empowerment were also seen by their supervisors as engaging in more proactive work behaviors. These results provide support for the foundational tenet of psychological empowerment, which proposes that individuals will pursue an active orientation to their work role as a consequence of psychological empowerment.

Servant Leadership

The rest of the reported results focused on answering hypotheses about the consequences of a positive form of leadership, known as servant leadership. Results showed that servant leader characteristics (i.e., the perception that individual's had of their immediate supervisor) at level-1 were positively related to problem prevention, individual innovation, voice, and taking charge. This relationship was found while controlling for proactive personality and six control variables.

Previous research has shown that servant leadership is positively related to employees' extra effort (Barbuto & Wheeler, 2006), and organizational citizenship behaviors (Ehrhart, 2004; Walumbwa, Hartnell, & Oke, 2010). However, no known research has examined servant leadership as an antecedent to proactive work behaviors. These positive relationships between servant leadership and proactive work behaviors are supported conceptually. Servant leaders are hypothesized to increase followers' autonomy (Greenleaf, 1977; Van Dierendonck, 2011) and ability to engage in positive behaviors (Liden, Wayne, Zhao, & Henderson, 2008; Searle & Barbuto, 2011). This positive relationship between servant leader characteristics at level-1 was also found when controlling for servant leadership characteristic at the group level. One note of caution, servant leader characteristics at level-1 explained a very small amount of variance in each of the four proactive work behaviors (i.e., between .69% and 3.27%). Thus, the relationships were positive and significant, but may seem to lack meaningfulness.

In contrast, servant leader characteristics at level-1 explained an additional 25.16% of the variance in psychological empowerment, beyond that of an individual's

proactive personality. This result is positive, significant, and meaningful, because it supports one of the foundational tenets of servant leadership, that servant leaders are able to empower their followers (Greenleaf, 1977). Through a focus on follower development, satisfying their needs, and helping them acquire self-actualization, servant leaders empower their followers to engage in positive behaviors (Van Dierendonck, 2011; Van Dierendonck & Patterson, 2010). Taken together, the positive relationships between servant leader characteristics at the individual level; and psychological empowerment and proactive work behaviors indicate that servant leaders may facilitate autonomous behavior in their followers.

In addition, psychological empowerment was found to mediate the relationship between servant leader characteristics at level-1 and the four proactive work behaviors. Psychological empowerment was a partial mediator for problem prevention and taking charge. It fully mediated the relationship between servant leader characteristics at level-1 and individual innovation. Servant leader characteristics were indirectly related to voice via psychological empowerment. Overall, these results show that servant leaders typically have an effect on positive outcomes by increasing their followers' motivational state (Ehrhart, 2004; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Searle & Barbuto, 2011; Van Dierendonck, 2011; Walumbwa, Hartnell, & Oke, 2010). Psychological empowerment generally was found to mediate the relationship between servant leader characteristics at level-1 and proactive work behaviors.

Results from this study showed that servant leader characteristics at the group level were non-significant predictors of the four proactive outcomes, or to psychological empowerment. Results showed that groups that had supervisors who displayed higher

servant leader characteristics on average, to all of their direct reports, did not predict the four proactive work behaviors or psychological empowerment. There was no incremental benefit to belonging to a group that had a supervisor who, on average, exhibited more servant leader characteristics to the entire group.

This is contrary to previous research that has shown servant leadership at the group level as having positive impacts (Ehrhart, 2004; Walumbwa, Hartnell, & Oke, 2010). Previous studies, however, only looked at servant leadership at the group level; while this study examined the incremental effect. These results show evidence for the notion that what matters most, is if the individual perceives their supervisor as having servant leader characteristics, regardless of what others in their group may think. In addition, psychological empowerment did not mediate the relationship because there was no relationship to mediate. Nor was it considered an indirect effect because there was not a relationship between servant leader characteristics at the group level and psychological empowerment at the individual level.

Contributions of this study

This study contributes to multiple streams of research within the field of organizational science. This study provides data to help better understand the antecedents of four proactive work behaviors: problem prevention, individual innovation, voice, and taking charge. Both individual differences and contextual differences were examined as possible antecedents. First, this study adds to the understanding of proactive personality. Specifically, this study explains the process by which proactive personality is related to the four proactive work behaviors. Psychological empowerment was found to both fully and partially mediate the relationship between proactive personality, and proactive work

behaviors. This study helps researchers understand the contextual antecedents of proactive work behaviors. Servant leadership was used as a predictor at both the individual and group levels. Previous work had not considered servant leadership as a contextual antecedent.

Second, this study adds to the empirical evidence on servant leadership. Servant leadership has largely been an intuitive idea that has been talked about for decades. Only recently have scholars started to empirically examine its foundational tenets (Barbuto & Wheeler, 2006; Ehrhart, 2004; Liden, Wayne, Zhao, & Henderson, 2008; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Walumbwa, Hartnell, & Oke, 2010). This study found that servant leader characteristics at level-1 were positively related to psychological empowerment and four proactive work behaviors. This empirical examination lends some support for the foundational tenet that servant leader characteristics help followers increase in autonomy, independence, and positive behavior (Greenleaf, 1977; Searle & Barbuto, 2011; Van Dierendonck, 2011).

Finally, this study is one of the first cross-level investigations of servant leadership. This was done by examining the incremental impact that servant leader characteristics at level-2 have over viewing servant leadership only as a level-1 phenomenon. The incremental effect of servant leader characteristics was not supported in this study. Belonging to a work group that displayed higher levels of servant leadership characteristics did not seem to have an effect on the individual level outcomes, above and beyond, that of the individual level servant leader characteristics. The number of groups in this study (i.e., 113 supervisors) was consistent with previous work done on servant leadership (Ehrhart, 2004; Walumbwa, Hartnell, & Oke, 2010). However, one possible

reason for the non-significant relationship could be the low group mean reliability (i.e., ICC(2)), which was found in the preliminary analyses. Future research may consider examining groups that exceed five direct reports per supervisor.

Strengths of the Study

This study had several strengths, as well as limitations. The strengths will be discussed first, and then some of the limitations will be discussed. The first strength is the fact that data was gathered from two different sources. The independent variables were gathered from the direct reports, and the dependent variables were gathered from supervisors. This reduced the problem of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

The second strength is the explicit nature in which the multilevel issue was addressed from the beginning of this study. Scholars have advocated that multilevel issues should be addressed in the theoretical/conceptual model, measurement, analysis and inferences (Yammarino, Dionne, Chun, & Dansereau, 2005). Rather than simply addressing the multilevel issue in the statistical analyses, this study sought to recognize the multilevel issue from the beginning. This study proposed a multilevel conceptual model, which explicitly recognizes the multilevel nature of examining followers nested within leaders (Snijders & Bosker, 1999). Conceptualizing a multilevel model in the conceptualization/theory stage of the research process is in line with recommendations by leading leadership scholars (Dansereau & Yammarino, 1998a; Klein, Dansereau, & Hall, 1994; Yammarino, Dionne, Chun, & Dansereau, 2005).

Furthermore, the multilevel issue was addressed in the measurement stage. This study measured the shared properties of groups by aggregating individual (i.e., direct

reports perceptions of their supervisor's leadership style) data only after having run the appropriate and necessary tests (i.e., ICC1, ICC, and $r_{wg(j)}$, which showed group consensus (Klein & Kozlowski, 2000). Third, a multilevel analysis was used that distinguishes the variance due to individual differences and the variance do to contextual differences (Bliese & Hanges, 2004). It also allowed for the group variance to be accounted for by potential predictors.

Finally, the multilevel issue was addressed in the inferences of the results reported. This was done by not inappropriately making inferences from the individual level to the group and organizational level (Kozlowski & Klein, 2000). Results showed that servant leader characteristics were positively related to individual level outcomes (i.e., psychological empowerment and four proactive behaviors). It would be an error to assume that because servant leader characteristics were positively related at the individual level, they would also be positively related at the group and organizational level. This study showed, that the group level of servant leadership was not positively related with the individual level outcomes. This study sought to deal with the multilevel nature of examining leaders and direct reports by explicitly recognizing it in theory/conceptual modeling, measurement, analysis and inference (Yammarino, Dionne, Chun, & Dansereau, 2005).

Finally, this study used an appropriate sample size of 113 supervisors to examine the group level effect of servant leader characteristics. This is similar to previous leading research on servant leadership that used 123 leaders (Walumbwa, Hartnell, & Oke, 2010), 120 leaders (Ehrhart, 2004), and substantially more than 17 leaders used in one study (Liden, Wayne, Zhao, & Henderson, 2008).

Limitations of the Study

As with any study, this study also had some limitations. The first limitation was the cross-sectional nature of the project. Leaders are seen as individuals that have certain characteristics or behaviors that facilitate positive outcomes in their followers. Ideal leaders are able to help facilitate change. However, to truly examine change in followers, a longitudinal study is needed. Cross-sectional studies only consider one point in time, and cannot track the change in behavior of direct reports over time. This study does not address the possibility that direct reports have always felt empowered and their level of empowerment do not decrease or increase in relation to their supervisor's characteristics or behaviors.

The second limitation is the correlational nature of this study. Results from this study do not show causation of the independent variables and dependent variables. None of the variables were experimentally manipulated, nor were participants randomly assigned to participate in the survey. Rather, employees from three departments received a survey. Because this study lacked an experimental procedure, results show only that the variables are correlated, rather than a causation path model.

The third limitation is the lack of ethnic diversity in the sample. The majority of the sample was Caucasian. In addition, this sample lacked heterogeneity in organizations that were used. Only a large public organization participated in this study, thus results should be interpreted appropriately.

The fourth limitation is the fact that the variables used in this study are all latent constructs, which makes it impossible to observe. For example, group variables can measure global or shared properties. Variables that are derived from global properties can

be observed and are objective. Variables from shared group properties are derived from the aggregate perceptions of group members. These types of variables are subjective and unobservable.

The final limitation is that the amount of variance being predicted by the independent variables in this study is relatively small, with the exception being servant leader characteristics at level-1 predicting 25.16% of the variance of psychological empowerment. The relationships in this study largely were positive, significant, and explained a small amount of variance.

Recommendations

Future research is needed to continue to examine both the individual and contextual antecedents of proactive work behaviors. First, researchers could design longitudinal designs to see if servant leader characteristics at level-1 continue to be positively related to followers' outcomes over time. This would allow researchers to examine the central tenet of servant leadership, that followers are developed over time because of their association with a servant leader. Longitudinal studies allow researchers to begin to track change over time.

Second, researchers need to continue to examine cross-level models of servant leadership. This study is the second known cross-level research study on servant leadership (Walumbwa, Hartnell, & Oke, 2010). Researchers need to continue to explore if servant leadership at the group-level has an incremental benefit to individuals. For example, "Is it most important for an individual to perceive their supervisor as having servant leader characteristics?" Or, "Is their also an additive benefit to belonging to a group that has a supervisor that displays an 'average leadership style' of servant

leadership?" Does it benefit direct reports to belong to a group that has a supervisor who displays servant leader characteristics to the majority of their direct reports?

Third, future research needs to examine if the positive relationships in this study hold across cultures. Technology has allowed our economy to become global, rather than regional. Leaders, know more than ever, and lead different types of individuals across cultures and nations. Researchers must examine servant leadership and its consequences across individuals of varying ethnicities and cultures. Are there some cultures where servant leadership is less effective? Are their some cultures where servant leadership is more effective? These and other questions are needed to examine the potential global impact of servant leadership.

Fourth, researchers need to perform qualitative studies that examine the process by which servant leadership facilitates empowerment within direct reports. This type of research could examine both direct reports, and servant leaders through conducting interviews. Data from the interview could then be analyzed using qualitative techniques to look for overarching themes. A qualitative research agenda allows researchers to gain the perspective of direct reports on how the servant leader characteristics of their supervisor influenced their empowerment. Also, a qualitative study could examine the perspective of supervisors. This would allow research to understand the intentional behaviors supervisors used to facilitate an increase in direct reports' empowerment. An understanding of the process by which empowerment is increased could help researchers design a leader development curriculum that enhances supervisors' servant leader behaviors.

Fifth, researchers need to examine the development of a servant leadership style. How do supervisors acquire servant leader characteristics? Can these characteristics be acquired by other supervisors desiring to increase their leadership abilities? What types of curriculum and experiential activities are best in facilitating the development of servant leadership? These and other developmental questions need to be examined. In addition, researchers need to examine the role that values, beliefs, and natural talents play in supervisors displaying servant leader characteristics. There is a possibility that servant leader characteristics stem from deep beliefs that a supervisor has of the inherent goodness of individuals.

Sixth, researchers need to examine the boundaries of servant leadership. For example, are their certain types of organizations or contexts in which servant leader characteristics flourish? Are their organizations or contexts that servant leaders may struggle in? Researchers also need to examine potential negatives of servant leadership. For example, does increasing a direct report's empowerment have negative ramifications? Does an overemphasis on follower development lead to too much follower autonomy, and a neglect of organizational needs? These types of questions have the potential to illustrate both the weaknesses and strengths of a servant leadership style of leadership.

Finally, researchers may examine the impact servant leader characteristics have on different types of performance (i.e., adaptive, proficient, and proactive performance). Scholars have found positive relationship between servant leadership and in-role performance (Liden, Wayne, Zhao, & Henderson, 2008). This study found a positive relationship between servant leader characteristics and proactive work behaviors. Future

research needs to examine if servant leader characteristics are better suited for facilitating in-role performance, adaptive performance, or proactive performance. Because of the relatively small percentage of variance explained in the proactive work behaviors, it seems likely that servant leader characteristics might be best suited for increasing in-role and adaptive performance, rather than proactive performance.

Conclusion

This study examined the contextual and individual differences as antecedents to four proactive work behaviors: problem prevention, individual innovation, voice, and taking charge. Results were reported that showed proactive personality was positively related to individual innovation, voice, and taking charge. Servant leader characteristics at level-1 were related to each of the four proactive behaviors. Servant leader characteristics at level-1 and proactive personality also significantly predicted psychological empowerment. Servant leader characteristics at level-1 explained an additional 25% of the variance in psychological empowerment. Finally, psychological empowerment was also found to mediate the relationship between the independent variables and each of the four proactive work behaviors.

Chapter VI

A MULTILEVEL EXAMINATION OF PROACTIVE WORK BEHAVIORS: CONTEXTUAL AND INDIVIDUAL DIFFERENCES AS ANTECEDENTS

Draft of Manuscript for Possible Publication

A MULTILEVEL EXAMINATION OF PROACTIVE WORK BEHAVIORS: CONTEXTUAL AND INDIVIDUAL DIFFERENCES AS ANTECEDENTS

Abstract

In this study, the process through which individual differences (i.e., proactive personality, psychological empowerment, and servant leader characteristics at level-1) and contextual differences (i.e., servant leadership characteristics at level-2) are antecedents to proactive work behaviors (i.e., problem prevention, individual innovation, voice, and taking charge) was explored. Results indicated that psychological empowerment partially mediated the relationship between proactive personality and individual innovation. Psychological empowerment fully mediated the relationship between proactive personality and taking charge. Proactive personality was indirectly related to problem prevention, via psychological empowerment. Psychological empowerment was directly related to voice. In addition, servant leader characteristics at level-1 were positively related to psychological empowerment and each of the four proactive work behaviors. Psychological empowerment partially mediated the relationship between servant leader characteristics at level-1, problem prevention, and taking charge. It fully mediated the relationship between servant leader characteristics at level-1 and individual innovation. Servant leader characteristics at level-1 were indirectly related to voice, via psychological empowerment. Relationships were not found between servant leader characteristics at level-2, and psychological empowerment, or proactive work behaviors.

A MULTILEVEL EXAMINATION OF PROACTIVE WORK BEHAVIORS: CONTEXTUAL AND INDIVIDUAL DIFFERENCES AS ANTECEDENTS

Practitioners and scholars have advocated viewing individuals as active agents, who are able to engage in proactive work behaviors that facilitate positive changes in themselves and their work environment (Ashford & Cummings, 1985; Bateman & Crant, 1993; Covey, 1989; Crant, 2000; Grant & Ashford, 2008). Individuals are not merely passive puppets of their work environment; rather they can make conscious decisions to succeed in adverse and uncertain conditions (Bandura, 1997; Cameron, Dutton, & Quinn, 2003; Cameron & Lavine, 2006; Seligman & Csikszentmihalyi, 2000). Proactive work behaviors are those self-initiated, change oriented, future-directed behaviors that enable positive change within the internal organization (Parker & Collins, 2010). As uncertainty and interdependence in the workforce increases at an exponential rate, employers are looking for employees that can strategically engage in proactive work behaviors to enhance work role effectiveness (Griffin, Neal, & Parker, 2007; Kotter, 1985; Parker & Collins, 2010). Proactive behaviors have been reported as having a positive relationship with individual job satisfaction (Ashford & Black, 1996), and individual job performance (Grant, Parker, & Collins, 2009; Van Dyne & LePine, 1998).

Researchers have proposed that both individual differences and contextual differences are antecedents to proactive work behaviors (Crant, 2000; Grant & Ashford, 2008; Parker, Bindl, & Strauss, 2010). Individual differences such as, desire for control (Ashford & Black, 1996), proactive personality (Parker & Collins, 2010), general self-efficacy and felt responsibility (Morrison & Phelps, 1999; Parker, 2000) have all been reported as antecedents to proactive behaviors. Scholars have also reported that flexible

role orientation and role breadth self-efficacy are two cognitive motivational states that mediate the relationship between individual differences, work environment differences, and proactive work behaviors (Parker, Williams, & Turner, 2006). Work environment variables such as job autonomy, co-worker trust (Parker, Williams, & Turner, 2006) and leader vision (Griffin, Parker, & Mason, 2010) also impact employees' proactive behaviors.

This study seeks to simultaneously examine individual differences and contextual differences as antecedents of proactive work behaviors. First, this study will seek to answer the call for additional cognitive motivational states that may explain the process through which employee traits are related to proactive work behaviors (Parker, Williams, & Turner, 2006) by proposing psychological empowerment as a mediating variable. Second, this study will seek to examine leader characteristics that may facilitate proactive work behaviors (Griffin, Parker, & Mason, 2010; Parker, Williams, & Turner, 2006). It is anticipated that as scholars understand the antecedents of proactive work behavior they may be able to facilitate its development in the workplace. If employee cognitive motivational states, such as psychological empowerment are essential, employers can facilitate the development of employees' cognitive motivational states through training interventions or work role restructuring. If supervisors' leadership style is related to employee proactive work behaviors, organizations may choose to help their supervisors develop a particular leadership style that is conducive to the development of employee proactive work behaviors. Employers may also choose to promote those individuals that possess a specific leadership style that will enhance their ability to facilitate proactive work behavior in their direct reports.

Proposed Cross-level Model of the Antecedents of Proactive Work Behaviors

The proposed model takes into consideration that phenomenon within organizations generally occurs at different levels. Scholars have advocated the importance of using multilevel modeling because it allows researchers to predict variance that is due to individual differences, and variance that is due to contextual factors (Bliese & Hanges, 2004; Dansereau & Yammarino, 1998a; 1998b; Klein & Kozlowski, 2000; Rousseau, 1985). The proposed model illustrates individual and contextual antecedents of proactive work behaviors by proposing a cross-level model (House, Rousseau, & Thomas-Hunt, 1995; Klein & Kozlowski, 2000). Researchers have advocated the importance of explicitly recognizing the multilevel nature of organization in theory/conceptual modeling, measurement, analysis, and inference (Dansereau, Alutto, & Yammarino, 1984; Klein, Dansereau, & Hall, 1994; Kozlowski & Klein, 2000; Yammarino & Dansereau, 2008). Interestingly, only 9% of the articles published in top leadership journals have taken an appropriate approach to the multilevel dilemma, most tend to focus on multilevel issues only in the analysis section or not at all (Yammarino, Dionne, Chun, & Dansereau, 2005). The proposed model seeks to explicitly recognize the inherent multilevel nature of organizational behavior at the conceptual stage through a multilevel conceptual model.

The proposed model (see Figure 1) will examine proactive work behaviors at the individual level. Proactive work behavior at the group/team or organizational levels will not be examined. Psychological empowerment is proposed as a cognitive motivational antecedent to each of the four proactive work behaviors. Scholars have reported that role breadth self-efficacy and flexible role orientation are cognitive motivational states that

are positively related to proactive work behavior (Parker, Williams, & Turner, 2006). However, scholars have not examined the impact of psychological empowerment on proactive work behaviors. In addition, previous research has shown a positive relationship between proactive personality and proactive work behaviors (Parker & Collins, 2010). This study seeks to expand the research by examining the process by which this relationship occurs. Specifically, it is proposed that psychological empowerment will act as a cognitive motivation state that will mediate the relationship between proactive personality and each of the four proactive work behaviors. The mediating impact of psychological empowerment has not been considered in previous research.

Insert Figure 1 About Here

This model relies on the assumption that leaders may portray an average leadership style (ALS) and individualized leadership (IL) (Rousseau, 1985; Yammarino & Dansereau, 2008). Individualized leadership is the one-to-one impact leaders have on their direct reports, and focuses on how the individual perceives their supervisor, regardless of how others in the group perceive them (Yammarino & Dansereau, 2008). Individualized leadership is measured at the individual level, and is shown in Figure 1 by proposing servant leader characteristic at level-1 as an antecedent to both psychological empowerment and proactive work behaviors. This is the perception that direct reports have of their supervisor displaying servant leader characteristics to them individually.

A leader may also portray an average leadership style by exhibiting similar traits, characteristics, or behaviors to all of their direct reports (Yammarino & Dansereau, 2008). ALS relies on the assumption that group constructs may originate from the shared properties (i.e., homogenous attitudes or perceptions) of group members (Klein & Kozlowski, 2000; Kozlowski & Klein, 2000). As leaders treat their direct reports in a similar manner, direct reports will also have similar perceptions of their leader (Klein & Kozlowski, 2000). After examining the degree of consensus of group members; individual level data is aggregated to the group level by taking the group mean. This represents servant leader characteristics at level-2 or the degree to, which the supervisor displays servant leader characteristics in a similar and consistent manner to all of their direct reports.

In this model, servant leader characteristics are proposed as an antecedent to both psychological empowerment and the four proactive work behaviors. It is anticipated that servant leader characteristics at level-2 will explain additional variance above and beyond that of servant leader characteristics at level-1. Scholars have not examined servant leader characteristics and psychological empowerment or employee proactive work behavior. Nor, have scholars ever considered the incremental effect of servant leader characteristics on employee behaviors.

Finally, psychological empowerment is proposed as a mediator of both servant leader characteristics at level-1 and level-2. Research is showing that servant leader characteristics generally have an impact on positive outcomes, via some type of positive cognitive motivational state (Ehrhart, 2004; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Searle & Barbuto, 2011; Walumbwa, Hartnell, & Oke, 2010). This study

proposes the relationship between servant leader characteristics at both levels, and proactive work behaviors at level-1 will be mediated by psychological empowerment. In summary, the hypothesized model proposes that individual differences and contextual differences will be related to the proactive work behaviors via psychological empowerment.

Proactive Work Behaviors

Proactive behaviors have largely been examined as discrete forms of behavior. For example, scholars have examined employees' feedback seeking behaviors (Ashford & Cummings, 1985), proactive socialization tactics (Ashford & Black, 1996), helping behavior, ability to voice constructive improvements to standard procedures (Van Dyne & LePine, 1998), taking charge (Morrison & Phelps, 1999), proactive idea implementation, proactive problem solving (Parker, Williams, & Turner, 2006), rational-issue selling (Grant, Parker, & Collins, 2009), and proactive performance (Griffin, Parker, & Mason, 2010). Recently, scholars proposed that 11 separate proactive work behaviors combine to form three second-order factors of proactive behavior: proactive work behaviors (behaviors focused on improving the internal organization), proactive strategic behaviors (behaviors aimed at helping the organization fit into its surrounding environment), and proactive environmental organization fit behaviors (behavior aimed at helping the individual fit into the organizational environment) (Parker & Collins, 2010). This study will focus on the second-order factor of proactive work behaviors.

Parker and Collins (2010) reported that proactive work behaviors include four dimensions: problem prevention, individual innovation, voice, and taking charge. Problem prevention occurs when employees seek to discover the root cause of problems,

and implement procedures to prevent future reoccurrence of the problem (Frese & Fay, 2001; Parker & Collins, 2010). Individual innovation occurs when an employee recognizes new and emerging opportunities, generate new ideas, and then implement the ideas (Scott & Bruce, 1994; Parker & Collins, 2010). The proactive behavior of voice occurs when employees express constructive challenges to improve the standard procedures of their work environment (Van Dyne & LePine, 1998; Parker & Collins, 2010). Finally, taking charge occurs when employees seek to improve the way work is executed (i.e., work structures, practice, and routines) (Morrison & Phelps, 1999; Parker & Collins, 2010). Each of these four proactive work behaviors, share the commonality of desiring to facilitate positive changes in the internal organization (Parker & Collins, 2010). This study conceptualizes proactive work behaviors as a four factor correlation model, which will allow further examinations of each of the four dimensions of proactive work behaviors.

Cognitive Motivational States

Researchers have proposed cognitive motivational states as both a direct antecedents of proactive work behaviors (Crant, 2000), and as a mediating variable that helps to explain the process by which individual differences or work context are related to proactive work behaviors (Crant, 2000; Grant & Ashford, 2008; Parker, Bindl, & Strauss, 2010). Role-breadth self-efficacy and flexible role orientation are two motivational states that have been reported as cognitive motivational states that mediate the relationship between individual differences (i.e., proactive personality), perceived work environment (i.e., co-worker trust and job autonomy) and proactive work behaviors (Parker, Williams, & Turner, 2006). One important cognitive motivational state, which

has received considerable attention in the organizational literature, is psychological empowerment (Kirkman & Rosen, 1999; Kraimer, Seibert, & Liden, 1999; Seibert, Silver, & Randoph, 2004; Spreitzer, 1996; Spreitzer, Kizilos, & Nason, 1997), but scholars have yet to examine it as an antecedent to proactive work behaviors.

Psychological empowerment has been conceptualized as a motivational construct that "reflects an active, rather than a passive, orientation to a work role (Spreitzer, 1995, p. 1444). Employees that have this active orientation desire to shape their work role and context (Spreitzer, 1995; 1996), and feel an increase in task motivation (Thomas & Velthouse, 1990), which may increase the likelihood of them engaging in proactive work behaviors. Psychological empowerment has been reported as being positively related to similar constructs as each of the four dimensions of proactive work behaviors.

Psychological empowerment has been positively related to manager innovation (Spreitzer, 1995), employee innovation (Pieterse, Knippenberg, Chippers, & Stam, 2010), and creative process engagement (Zhang & Bartol, 2010). Each of these consequences, are focused on generating novel and new ideas, which is similar to the proactive work behavior of individual innovation. Psychological empowerment also consists of individuals having confidence in their own ability to accomplish their work-role and an individual's perception that their work role has meaning (Spreitzer, 1995). Both of these are conceptually similar to self-efficacy and felt responsibility, which have been shown to be an antecedent of the proactive work behavior of taking charge (Morrison & Phelps, 1999). Finally, psychological empowerment consists of an individual's perception that they are in control (i.e., self-determination), and can initiate changes that have an impact on work role outcomes (Spreitzer, 1995). Employees that engage in expressing voice do

so because they feel they have the control to initiate changes, regardless of what others say. Employees that engage in problem prevention believe they will have an impact on future problems through strategic problem prevention planning. Therefore, it seems likely that psychological empowerment will be positively related to each of the four proactive work behaviors

> Hypothesis 1: At the individual level, psychological empowerment will be positively related to problem prevention, individual innovation, voice, and taking charge.

Researchers have also looked at a variety of antecedents to psychological empowerment. These have included both personality antecedents and also environmental or contextual antecedents. Self-esteem, rewards, and access to information (Spreitzer, 1995), span of control, sociopolitical support, work climate (Spreitzer, 1996), job meaningfulness, job autonomy, and task feedback (Kraimer, Seibert, & Liden, 1999), work-level psychological climate (Seibert, Silver, & Randoph, 2004), and finally leadership styles, such as transformational leadership (Avolio, Zhu, & Koh, 2004; Castro, Villegas Perinan, & Bueno, 2008; Pieterse, Knippenberg, Chippers, & Stam, 2010), transactional leadership (Pieterse, Knippenberg, Chippers, & Stam, 2010), and empowering leadership (Zhang & Bartol, 2010) were all reported as antecedents to psychological empowerment. One personality antecedent that has not been examined is proactive personality.

A proactive personality consists of an individual that is active and seeks to positively change themselves or their environment (Crant, 2000). A proactive personality leads individuals to seek out information, opportunities, and solutions. Proactive personality has been linked to extracurricular activities, personal achievements (Bateman & Crant, 1993) and entrepreneurial intentions (Crant, 1996). A proactive personality allows individuals to have a perception that they can make a difference and be active participants of their work role. Therefore, it seems plausible that a proactive personality will be an antecedent to psychological empowerment.

Hypothesis 2: At the individual level, proactive personality will be positively related to psychological empowerment.

The process of how proactive personality is related to proactive behaviors needs further investigation. Psychological empowerment is a motivational state that may help further explain this relationship. Thompson (2005) reported that initiative taking mediates the relationship between proactive personality and performance. This seems conceptually similar to psychological empowerment, which is the perception an individual has that they can initiate, and bring forth positive changes in their work role. Therefore, psychological empowerment will mediate the relationship between proactive personality and the four proactive work behaviors of taking charge, voice, individual innovation, and problem prevention.

Hypothesis 3: At the individual level, psychological empowerment will partially mediate the relationship between proactive personality and the proactive work behaviors of problem prevention, individual innovation, voice, and taking charge.

Servant Leader Characteristics

Conceptualizing a leader as a servant has been a topic that has been discussed for centuries. An ancient Chinese sage named Lao-tzu, proposed in the sixth century, that leadership is service, and leaders are to guide, assist, develop and strengthen their followers (Ching & Ching, 1995). Centuries later Jesus Christ became the model of servant leadership as he taught and modeled the importance of leaders serving their followers (Sendjaya & Sarros, 2002).

In the twentieth century Robert Greenleaf (1977) is credited with conceptualizing the leader as a servant, and the subsequent title servant leadership. Greenleaf proposed that the ultimate test of a servant leader when he stated:

> "The best test, and difficult to administer, is this: Do those served grow as persons? Do they, while being served become healthier, wiser, freer, more autonomous, more likely themselves to become servants? And, what is the effect on the least privileged in society? Will they benefit or at least not be further deprived?" (Greenleaf, 1977, p. 27).

Servant leaders enable their followers to become wiser, freer, more autonomous, and independent. This quest to facilitate, foster, and cultivate lasting evolutionary growth in individuals is a central tenet of servant leadership (Van Dierendonck, 2011).

Servant leadership is theorized to be a style of leadership that is able to facilitate trust, respect, fairness, and loyalty (Van Dierendonck, 2011). Servant leaders are primarily focused on satisfying the needs of their followers (Greenleaf, 1977). Similarly, contextual variables such as leader support, positive interpersonal climate, and co-worker support are reported antecedents to proactive behavior (Parker, Bindl, & Strauss, 2010). Servant leaders are also able to facilitate autonomy in their followers and help them become more independent and free to govern their life, while making positive changes in their environment (Greenleaf, 1977; Liden, Wayne, Zhao, & Henderson, 2008). Therefore, it seems plausible that a servant leadership will be a contextual antecedent to individual level proactive work behaviors.

Hypothesis 4: At the individual level, servant leadership is positively related to individual level employee proactive work behaviors of taking charge, voice, individual innovation, and problem prevention.

Servant leaders are primarily focused on satisfying the needs of their followers (Greenleaf, 1977). Similarly, contextual variables such as leader support, strong interpersonal climate, and co-worker support are proposed antecedents to proactive work behaviors (Parker, Bindl, & Strauss, 2010). Servant leaders are also able to facilitate autonomy in their followers and help them become more independent and free to govern their lives, while making positive changes in their environment (Greenleaf, 1977; Liden, Wayne, Zhao, & Henderson, 2008). Therefore, it seems plausible that servant leadership will be a contextual antecedent to group level proactive work behaviors.

Hypothesis 5: At the group level, servant leader characteristics will have an incremental effect beyond that of the individual level of servant leadership characteristics on employee proactive work behaviors of taking charge, voice, individual innovation, and problem prevention.

The vast number of outcomes associated with psychological empowerment give evidence to the potentially beneficial impact that psychological empowerment may have within organizations. As organizations choose to invest in developing psychological empowerment of their employees, they may see many positive benefits. This investment would increase employee productivity (Spreitzer, 1995; Spreitzer, de Janasz, & Quinn, 1999), efficiency (Spreitzer, Kizilos, & Nason, 1997), commitment (Kraimer, Seibert, & Liden, 1999), and satisfaction (Castro, Villegas Perinan, & Bueno, 2008; Spreitzer, Kizilos, & Nason, 1997). Therefore, organizations need to consider the work contexts that may facilitate psychological empowerment. For example: work climate, access to information, and transformational leadership have all been reported as antecedents to psychological empowerment (Avolio, Zhu, & Koh, 2004; Castro, Villegas Perinan, & Bueno, 2008; Seibert, Silver, & Randoph, 2004).

Though transformational leadership and transactional leadership have been found to be significantly related to empowerment, other styles of leadership also need to be considered. Transformational leadership focuses on obtaining organizational objectives, rather than developing and empowering individuals (Graham, 1991; Smith, Montagno, & Kuzmenko, 2004). In contrast, servant leadership is centered on the development of the followers and empowering them so they can make a difference (Searle & Barbuto, 2011;

Smith, Montagno, & Kuzmenko, 2004). Servant leadership has been shown to be able to explain additional variance beyond that of transformational leadership and leader member exchange (Barbuto & Wheeler, 2006; Liden, Wayne, Zhao, & Henderson, 2008).

Servant leadership is a follower oriented style of leadership and theoretically, a form of leadership that fosters positive follower attitudes of commitment, satisfaction, engagement, and empowerment (Van Dierendonck, 2011). Previous research on servant leadership has reported positive relationships between three of the four follower attitudinal outcomes. Servant leadership characteristics are positively related to follower commitment (Liden, Wayne, Zhao, & Henderson, 2008), follower satisfaction (Barbuto & Wheeler, 2006), and follower engagement (i.e., extra work effort) (Barbuto & Wheeler, 2006). Therefore, it seems that servant leadership will also facilitate the fourth proposed follower attitudinal outcome empowerment (Van Dierendonck, 2011). Building followers' sense of empowerment is a central tenet of servant leadership (Greenleaf, 1977; Smith, Montagno, & Kuzmenko, 2004). Servant leadership creates a work context that may facilitate the development of psychological empowerment.

Hypothesis 6: At the individual level, servant leadership is positively related to employees' psychological empowerment.

At the group level, servant leadership may facilitate psychological empowerment above and beyond that of individual level servant leadership. Scholars have proposed that work group leadership may explain between-group variance in psychological empowerment (Seibert, Silver, & Randoph, 2004). Servant leadership has been theorized

as occurring at the individual and group levels (Greenleaf, 1977). Empirical research has shown that group level servant leadership is related to commitment to supervisor (Walumbwa, Hartnell, & Oke, 2010), indicating that group level servant leadership may also facilitate positive follower attitudes, such as empowerment. Servant leaders build a sense of work group cohesion and empowerment (Ehrhart, 2004; Van Dierendonck, 2011). In addition, research today has not yet examined the incremental effect of group level servant leadership. Servant leadership characteristics at the group level will also be positively related to psychological empowerment and explain additional variance in individual-level psychological empowerment above that of individual-level servant leadership characteristics.

> Hypothesis 7: At the group level, servant leader characteristics will have an incremental effect beyond that of the individual level of servant leadership characteristics on employees' psychological empowerment.

Servant leadership is also seen as a style of leadership that can bring about the development of followers. Servant leadership is seen as an evolutionary form of leadership, which is in contrast to more popular quick fix leadership styles (Smith, Montagno, & Kuzmenko, 2004; Spears, 1995). Servant leaders build long-term positive relationships with their followers, which leads to the development of their followers (Liden, Wayne, Zhao, & Henderson, 2008). Their followers then have increased capacity, autonomy, and ability, which enable them to instigate positive changes in multiple contexts. Thus, servant leaders are able to make positive changes in the work place

through the development of their followers, which leads to greater positive outcomes. Therefore, psychological empowerment will mediate the relationship between servant leadership and proactive work behaviors.

Hypothesis 8: At the individual level, psychological empowerment will mediate the relationship between servant leadership characteristics and the proactive work behaviors of voice, taking charge, individual innovation, and problem prevention.

Hypothesis 9: Psychological empowerment at the individual level will mediate the cross level relationship between group level servant leadership characteristics and individual level proactive work behaviors.

METHODOLOGY

In this study there were 113 supervisors (i.e., groups). It was anticipated that servant leadership could be aggregated to the group level, which would allow it to be used as a predictor for some of the group variance in psychological empowerment and proactive work behaviors. Because of the large number of groups, and the desire to predict group variance, a multilevel analysis was used (Snijders & Bosker, 1999).

Participants

Participants for this research study were 410 direct reports, and 113 supervisors, from three departments within one large public organization (i.e., state government agency) in the United States. The majority were female (61.2%), and (36.8%) were male. The sample consisted primarily of white (not of Hispanic origin) (91.0%), Hispanic (2.7%), African American (1.7%), Asian (1.7%), American Indian (.5%), and other (.5%) people.

Direct reports tended to have the same supervisor for more than one year. In this sample, 6.6% of the direct reports reported that their supervisor had been their leader for less than six months, 6.8% reported that their supervisor had been their leader for 7-12 months, 37.8% reported that their supervisor had been their leader for 1-3 years, 24.9% reported that their supervisor had been their leader for 4-6 years, 9.5% reported that their supervisor had been their leader for 7-10 years, 9.0% reported that their supervisor had been their leader for 11-15 years, and 3.4% reported that their supervisor had been their leader for 21-25 years. In summary, 84.60% reported that their supervisor had been their leader for one year or longer. Servant leadership is seen as a long-term evolutionary style of leadership (Smith, Montagno, & Kuzmenko, 2004). Therefore, the extended period of time that direct reports have been associated with their respective supervisors allows

direct reports to give an in-depth understanding of their supervisor's servant leader characteristics.

Measures

Four established measures were used. The independent variables (i.e., servant leadership characteristics of supervisors, and proactive personality) and mediating variable (i.e., psychological empowerment) were gathered by asking the direct reports. The dependent variables (i.e., problem prevention, individual innovation, voice, and taking charge) were obtained by asking the supervisors to answers items measuring their perception of their direct reports proactive work behaviors. Gathering data from two sources (i.e., supervisors and direct reports) is one method to avoid the problem of common method bias that is prevalent in many organizational studies (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Servant Leadership

Servant leadership was measured by using the Servant Leadership Questionnaire (Barbuto & Wheeler, 2006). The SLQ consisted of 23 items reported on a five point Likert-type scale (1 to 5), which measured five dimensions. Each of the five dimensions had reliability estimates as follows: altruistic calling ($\alpha = .93$), emotional healing ($\alpha=.94$), wisdom ($\alpha = .96$), persuasive mapping ($\alpha=.91$), and organizational stewardship ($\alpha = .92$). In this study, servant leadership was conceptualized as a higher-order factor, which had a reliability estimate of $\alpha=.96$.

Servant leader characteristics include both individual and aggregate data (i.e., the mean scores of the 113 supervisors), which means there are two variables for servant leadership. The first variable contains the individual data or servant leader characteristics

at level-1. This examines the one-to-one impact leaders have on their direct report or how the individual perceives their supervisor (Yammarino & Dansereau, 2008). The second variable contains aggregated individual data or servant leader characteristics at level-2. This examines the average leadership style of the supervisor or the tendency to exhibit similar servant leader characteristics or behaviors to all of their direct reports (Rousseau, 1985; Yammarino & Dansereau, 2008). This is a group assessment because individual data has been aggregated to measure the shared properties of the group (Kozlowski & Klein, 2000). Hypothesizing servant leadership as a group variable means there is consensus among group members that their supervisor has the tendency to exhibit servant leader characteristics to all of the direct reports.

Psychological Empowerment

Psychological empowerment was measured by using a well established measure (Spreitzer, 1995).This measure included 12 items reported on a seven point Likert-type scale (1=strongly disagree to 7=strongly agree), which measured four dimensions (i.e., meaning, competence, self-determination, and impact). Reliability estimates for this study were meaning (α = .92), competence (α = .83), self-determination (α = .88), and impact (α = .92). In this study, psychological empowerment was conceptualized as a higher-order factor, which had a reliability of α=.88.

Proactive Personality

Proactive personality was measured by using a shortened version of Bateman and Crant's (1993) measure, which was used by Seibert, Crant, and Kraimer (1999). This shortened version used 10 items reported on a seven point Likert-type scale (1=strongly

disagree to 7=strongly agree). This measure had a reliability of α=.88. In this study, proactive personality was conceptualized as a one-dimensional construct.

Proactive Work Behaviors

The four proactive work behaviors were measured by taking items from Parker and Collins' (2010) measure on proactive work behavior. This measure included 13 items reported on a five-point Likert-type scale (1=very infrequently to 5=very frequently). The four proactive behaviors had the following reliability: problem prevention (α = .86), individual innovation (α = .85), voice (α = .90), and taking charge (α = .95). These items were completed by the supervisor, and measured the perception the supervisor had that a particular direct report would engage in these four proactive work behaviors. These thirteen items were completed for two to ten of their direct reports. In this study, the proactive work behaviors were conceptualized as a correlated four factor model.

Control Variables

Several key demographic variables were used as control variables: age, time with supervisor, interaction with supervisor, educational level of direct report, job tenure and organizational tenure. First, age was obtained from the personnel department of the public organization. Age was rounded to the nearest year. Second, time with supervisor obtained from the following item: "How long has [supervisor's name] been your supervisor?" Third, interaction with supervisor was measured with the following item: "How often do you interact with [supervisor's name]?" Fourth, educational level was assessed by asking: "What is the highest level of education you have completed?" Fifth, job tenure was obtained from the organization: this consisted of the number of years the employee had been at their current position. Finally, organizational tenure consisted of

the number years the employee has been with the organization. This information was also obtained from the organization.

Data Collection Procedures

An electronic survey was distributed to 1,778 direct reports using the email addresses received from the public organization's personnel department. These direct reports were from potentially 359 different supervisors (i.e., groups). Responses were received from 975 direct reports, for a response rate of 55%. The responses from the direct reports were organized to examine how many supervisors had direct reports that completed the survey. If a supervisor had less than two direct reports, they were excluded. To prevent survey fatigue of supervisors, a ceiling of 10 direct reports per supervisor was used. If a supervisor had more than 10 direct reports, random digit numbers were generated to determine which employees would be excluded from this research study.

A secondary electronic survey was then distributed to supervisors asking for their perception of their direct reports proactive work behaviors. This was distributed to 207 supervisors or 58% of the supervisors. Data was obtained from 113 supervisors or a response rate of 55%. Data from the direct reports and supervisors surveys were combined to form a complete data set. This resulted in responses from 410 direct reports, and 113 supervisors.

Analyses

In this study several preliminary analyses were completed before the multilevel analyses could be completed. First, confirmatory factor analysis was used to establish both convergent and discriminant validity (Brown, 2006; Kline, 2005). Second the

amount of between-group variance in the outcome variables, were calculated (Bliese, 2000). Third, preliminary analyses needed to properly aggregate the servant leader characteristics to the group level were estimated (Bliese, 2000; James, Demaree, & Wolf, 1984). Finally, a series of Hierarchical Linear Models were conducted to examine the proposed relationships between the variables (Raudenbush & Bryk, 2002; Snijders & Bosker, 1999).

RESULTS

Preliminary Analyses

First, we estimated a seven factor measurement model. This model included servant leadership and psychological empowerment as higher order factors, proactive personality as a one dimensional construct, and proactive work behavior (i.e., problem prevention, individual innovation, voice, and taking charge) as a four factor correlated model. Items were used as indicators for each latent factor. The first factor loading of each factor was fixed to one (Kline, 2005). This seven factor model had the following fit statistics chi-square was χ^2(df=1566) = 3142.72, p<.001; CFI=.93; RMSEA=.05; SRMR=.05. The criterion for good fit followed the recommendations of Hu and Bentler (1999) and was measured by the following standard, a chi square that fails to reject the null hypothesis p> .05; RMSEA< .06, SRMR <.08 and CFI>.95. This model showed excellent fit according to the SRMR and RMSEA index and acceptable fit according to the CFI. Generally, CFI between .93-.95 are considered acceptable fit (Kline, 2005). This seven factor measurement model is an appropriate representation of the data, and will be used in further analyses.

Convergent validity was evaluated by examining whether each factor loading had a statistically significant loading on its specified latent factor. As shown in Table 1, the factor loadings for all seven factors were significant ($p < .001$) and corresponded to their proposed latent factors. Each of the items loaded significantly onto the latent factor. In addition, each of the loadings for the higher-order factors (i.e., servant leadership and psychological empowerment) loaded significantly onto the higher-order latent factor (see Table 1). The results demonstrate patterns of convergent validity.

Insert Table 1 About Here

To examine discriminant validity a series of models were estimated, which proposed combining one or more of the seven latent factors from the measurement model. First, a model was estimated that considered the proactive work behaviors as one-dimensional. This was done because of the relatively high correlations—these values ranged from .17 to .85 with a mean of .38 (see Table 2). This CFA model had the following fit statistics chi-square was $\chi^2(df=1583) = 4176.60$, $p<.001$; CFI=.88; RMSEA=.06; SRMR=.10. A deviance difference test was calculated

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Insert Table 2 About Here

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between this four factor model and the previous seven factor measurement model. The deviance difference test (17)=1033.87, p <.001 showed that this four factor model is significantly worse than the previous seven factor model. An additional four models were estimated each combining varying latent factors. Deviance difference tests were calculated to compare each additional model to the proposed seven factor measurement model. Examination of the six contradicting models with the seven factor measurement model showed that the each alternative model was found to be significantly worse than the seven factor measurement model, which indicates that the seven latent constructs are distinct (see Table 3).

Insert Table 3 About Here

The amount of between-group variance in the four proactive work behaviors and psychological empowerment was estimated. This was done by comparing chi-squared difference tests for two unconditional models—one with a random intercept variance term for supervisors and one without the random intercept.

> *Psychological Empowerment.* Comparison of an unconditional random intercept model, with a second unconditional model, resulted in a significant improvement in model fit, REML deviance difference χ^2(df=1) = 11.69, p < .001, ICC(1)=.1421, or 14.21% of the variance in psychological empowerment can be contributed to group membership.
> *Problem Prevention.* Comparison of unconditional random intercept model with a second unconditional model, resulted in a significant improvement in model fit,

REML deviance difference χ^2(df=1) =38.16, p < .001, ICC(1) =.2744, or 27.44% of the variance in problem prevention can be attributed to group membership.
Individual innovation. Comparison of unconditional random intercept model with a second unconditional model, resulted in a significant improvement in model fit, REML deviance difference χ^2(df=1) = 27.81, p < .001, ICC(1) =.2238, or 22.38% of the variance in individual innovation can be attributed to group membership.
Voice. Comparison of unconditional random intercept model with a second unconditional model, resulted in a significant improvement in model fit, REML deviance difference χ^2(df=1) =21.35, p < .001, ICC(1) =.1830, or 18.30% of the variance in voice can be attributed to group membership.
Taking Charge. Comparison of unconditional random intercept model with a second unconditional model, resulted in a improvement in model fit, REML deviance difference χ^2(df=1) = 24.43, p < .001, ICC(1) =.2184, or 21.84% of the variance in taking charge can be attributed to group membership.

The comparisons resulted in a significant improvement in model fit for each of the four proactive work behavior variables and for psychological empowerment. This indicates that the direct reports did vary significantly in each of the outcomes according to the group they were in. At this point level-2 predictors can be investigated, which opens the way for servant leadership conceptualized at the group level to predict some of the variance of psychological empowerment, and variance in the four proactive work behaviors. The significant ICC(1) also illustrates the need for a multilevel analysis because a percentage of the variance in the four outcomes can be attributed to belonging to a specific group.

To investigate the plausibility of aggregating servant leadership to the group-level the ICC(1), ICC(2) (Bliese, 2000) and $r_{wg(j)}$ (James, Demaree, & Wolf, 1984) for servant leadership were estimated. Significant between-group variance was found for servant leader characteristic [F(112,282) =1.73, p < .001. The ICC(1)= .17; ICC(2)= .42, and median $r_{wg(j)}$ value was .89. Following the procedure of similar research on servant leadership we acknowledge the lower group mean reliability, and aggregated to the group-level (Liden, Wayne, Zhao, & Henderson, 2008).

Multilevel Analyses

A series of multilevel models were estimated to test the proposed hypotheses. First, we controlled for age, the length of time the supervisor had been a direct report's leader, number of interactions the direct report had with their immediate supervisor, educational level, job tenure, and organizational tenure (see model 1 in Tables 4-8). In addition, the independent variables were grand-mean centered, which follows recent recommendations that propose grand mean centering is needed when considering cross-level models (Enders & Tofighi, 2007).

Hypothesis one examined if psychological empowerment was positively related to each of the four proactive work behaviors. Psychological empowerment was found to be positively related to problem prevention ($p<.001$), individual innovation ($p<.001$), voice ($p<.001$), and taking charge ($p<.001$) (see model 3 in Table 4-7).

Hypothesis two and six examined if proactive personality and servant leader characteristics at level-1 were positively related to employee's psychological empowerment. Results showed that both variables were positively related to psychological empowerment (see model 3 in Table 8). Proactive personality explained 19.64% of the variance in psychological empowerment when entered alone (see model 2 in Table 8), and when servant leader characteristics at level-1 was added to the model it explained an additional 25.16% of the variance (see models 2 and 3 in Table 8). Taken together proactive personality and servant leader characteristics at level-1 explained 39.85% of the variance in psychological empowerment. Hypothesis two and six were supported.

Hypothesis four examined servant leader characteristics at level-1 as an individual level predictor of each of the four proactive work behaviors (i.e., problem prevention, individual innovation, voice, and taking charge). As hypothesized servant leader characteristics at level-1 was positively related to problem prevention ($p<.001$), individual innovation ($p<.01$), voice ($p<.01$), and taking charge ($p<.001$) (see model 2 in Tables 4-7). Hypothesis four was supported.

Insert Table 4 About Here

Hypothesis three and eight examined the mediating impact of psychological empowerment on the relationship between the independent variables (i.e., proactive personality, and servant leader characteristics at level-1) and each of the four proactive work behaviors. To test the mediating impact of psychological empowerment we followed the four step processes outlined by Mathieu and Taylor (2006; 2007). First, the X→Y relationships were examined. Hypothesis four showed that servant leader characteristics at level-1 were positively related to each of the four proactive behaviors (see model 2 in Tables 4-7). Proactive personality was positively related to individual innovation, voice, and taking charge (see model 2 in Tables 5-7). With the non-significant effect of proactive personality on problem prevention (see Model 2 in Table 4) proactive personality can only be examined as having an indirect effect on problem prevention, via psychological empowerment (Mathieu & Taylor, 2006).

Insert Table 5 About Here

Second, the X→M relationship was examined in hypothesis two and six. Both proactive personality and servant leader characteristics at level-1 were positively related to psychological empowerment (see model 3 in Table 8). Third, the M→Y relationship was tested for hypothesis one. Results showed that psychological empowerment was positively related to each of the four proactive work behaviors (see model 3 in Tables 4-7).

Insert Table 6 About Here

Finally, the mediating effect of psychological empowerment was tested by entering it simultaneously into a model with both proactive personality and servant leader characteristics at level-1. This resulted in psychological empowerment being positively related to problem prevention ($p<.01$), servant leader characteristics at level-1 was also found to be positively related ($p<.01$), and proactive personality was found to be non-significant ($p>.54$) (see model 4 in Table 4). This means that the relationship between servant leader characteristics at level-1, and problem prevention was partially mediated by psychological empowerment. In contrast, the relationship between proactive personality and problem prevention was indirectly related, via psychological empowerment. Psychological empowerment was significantly related to individual

innovation ($p<.01$), while servant leader characteristics at level-1 was non-significant ($p>.06$), and proactive personality was significant ($p<.05$) (see model 4 in Table 5). This means that psychological empowerment partially mediated the relationship between proactive personality and individual innovation, while fully mediating the relationship between servant leader characteristics at level-1 and individual innovation.

Insert Table 7 About Here

Psychological empowerment was non-significantly related to voice ($p>.06$), servant leader characteristics at level-1 was also non-significant ($p>.07$), and proactive personality was significant ($p<.05$). This means that servant leader characteristics at level-1 were indirectly related to the proactive work behavior of voice, via psychological empowerment. Proactive personality was directly related to voice. Finally, psychological empowerment was significantly related to taking charge ($p<.001$), servant leader characteristics at level-1 was also significantly related ($p<.05$), and proactive personality was non-significant ($p> .16$). This means that psychological empowerment partially mediated the relationship between servant leader characteristics at level-1 and taking charge, while fully mediating the relationship between proactive personality and taking charge.

Hypothesis five and seven examined if servant leader characteristics at the group level will have an incremental effect above, and beyond that of the individual level. A new model was estimated that had servant leader characteristics at both level-1 and level-2 as predictors. In addition, proactive personality was entered as a predictor.

Results showed that servant leader characteristics at level-2 was non-significant (problem prevention $p>.06$; individual innovation $p<.27$; voice $p>.17$; taking charge $p>.19$) in predicting each of the four proactive work behaviors. In addition, it was non-significantly related to psychological empowerment ($p>.39$). Belonging to a group with a supervisor that on average portrayed a higher level of servant leader characteristics to all of their direct reports did not predict psychological empowerment or any of the four proactive work behaviors. Hypotheses five and seven were not supported.

Insert Table 8 About Here

Hypothesis nine examined if psychological empowerment would also mediate the relationship between servant leader characteristics at level-2 and each of the four proactive work behaviors. Previous results from hypothesis five and seven showed servant leader characteristics at level-2 were non-significantly related to the four proactive work behaviors and psychological empowerment (see model 5 in Table 4-7 and model 4 in Table 8). This means that the direct X→Y relationship between servant leadership at level-2 and the individual level proactive work behaviors was not supported. In addition, servant leader characteristics aggregated to level-2 did not predict psychological empowerment (see model 4 in Table 8). However, research did show a significant relationship between psychological empowerment and each of the four proactive work behaviors (see model 3 in Tables 4-7). According to Mathieu and Taylor

(2006; 2007) the necessary relationships were not found to further explore psychological empowerment as a partial mediator. Hypothesis nine was not supported. A summary of hypothesized findings are included in Table 9 below.

Insert Table 9 About Here

DISCUSSION

This research study explored individual and contextual differences as antecedents to four proactive work behaviors, and the mediating impact psychological empowerment may have on these relationships. Proactive personality and servant leader characteristics (level-1 and level-2) were examined as possible antecedents. Psychological empowerment was examined as a mediating variable for both levels. This section will discuss the findings, the strengths and limitations of the study, give some recommendations for future research, and end with some implications for practice.

Proactive Personality

Overall examination of the findings showed that proactive personality was positively related to proactive work behaviors. These findings are similar to previous research that has also shown proactive personality as having a direct positive relationship with each of the four positive work behaviors (Griffin, Neal, & Parker, 2007; Parker & Collins, 2010). However, when servant leader characteristics at level-1 were added to the model, proactive personality was no longer related to problem prevention.

Individuals with a proactive personality have a perception that they can make a difference, and be active participants in their work role. Individuals with a proactive

personality tend to seek out information, opportunities, and solutions to work problems (Crant, 2000). In this study, employees' proactive personality was positively related to individual innovation, voice, and taking charge. One implication for practitioners is to hire individuals with a proactive personality, if they desire to have a proactive work force. These results give sufficient support for hypothesis one, and provide the basis to examine more complicated mediating models that will be discussed below.

This study also examined proactive personality as an antecedent to psychological empowerment. Results showed that proactive personality was positively related psychological empowerment. Individuals that had higher proactive personality also had higher levels of psychological empowerment. This result is consistent with previous research that has also shown a positive relationship with other personality antecedents (Spreitzer, 1995). It is also consistent with the conceptualization of proactive personality. Scholars have proposed that individuals with a proactive personality are motivated to improve, seek out opportunities, and facilitate change (Crant, 2000). Psychological empowerment seems like a plausible result and proposed relationships were supported in this study.

This study also explored the process by which proactive personality and the four proactive behaviors were positively related. Scholars have previously suggested that motivational cognitive states may mediate this relationship (Parker, Williams, & Turner, 2006; Thompson, 2005). This study examined if psychological empowerment may be one motivational state that could help explain this positive relationship. Results showed that psychological empowerment fully mediated one of the four proactive work behaviors (i.e., taking charge). Psychological empowerment partially mediated the relationship

between proactive personality and individual innovation. Proactive personality was indirectly related to problem prevention and directly related to voice. These results indicate that it is generally through a cognitive motivational state (i.e., psychological empowerment) that individuals with a proactive personality are positively related to proactive work behaviors. One implication is if organizations desire to have a proactive work force they must hire individuals with a proactive personality, but they must also ensure that their organizational culture, job descriptions, and policies all facilitate positive cognitive motivational states.

Psychological Empowerment

Psychological empowerment is conceptualized as a motivational construct that "reflects an active, rather than a passive, orientation to a work role" (Spreitzer, 1995, p. 1444). It seems likely that a consequence of psychological empowerment would be direct reports who are engaged in enhancing their work role through participating in proactive work behaviors. Results from this study strongly supported this notion. Psychological empowerment was positively related to problem prevention, individual innovation, voice, and taking charge. Psychological empowerment explained the most variance in each of the four proactive behaviors when compared to proactive personality, and the contextual variable of servant leadership style. Previous research had reported positive relationships between psychological empowerment and employee innovation (Pieterse, Knippenberg, Chippers, & Stam, 2010), but had not examined psychological empowerment as an antecedent to each of the four proactive work behaviors.

The results from this study showed that direct reports with higher levels of psychological empowerment were also seen by their supervisors as engaging in more

proactive work behaviors. These results provide support for the foundational tenet of psychological empowerment, which proposes that individuals will pursue an active orientation to their work role as a consequence of psychological empowerment.

Servant Leadership

The rest of the reported results focused on answering hypotheses about the consequences of a positive form of leadership, known as servant leadership. Results showed that servant leader characteristics (i.e., the perception that individual's had of their immediate supervisor) at level-1 were positively related to problem prevention, individual innovation, voice, and taking charge. This relationship was found while controlling for proactive personality and six control variables.

Previous research has shown that servant leadership is positively related to employees' extra effort (Barbuto & Wheeler, 2006), and organizational citizenship behaviors (Ehrhart, 2004; Walumbwa, Hartnell, & Oke, 2010). However, no known research has examined servant leadership as an antecedent to proactive work behaviors. These positive relationships between servant leadership and proactive work behaviors are supported conceptually. Servant leaders are hypothesized to increase followers' autonomy (Greenleaf, 1977; Van Dierendonck, 2011) and ability to engage in positive behaviors (Liden, Wayne, Zhao, & Henderson, 2008; Searle & Barbuto, 2011). This positive relationship between servant leader characteristics at level-1 was also found when controlling for servant leadership characteristic at the group level. One note of caution, servant leader characteristics at level-1 explained a very small amount of variance in each of the four proactive work behaviors (i.e., between .69% and 3.27%).

Thus, the relationships were positive and significant, but may seem to lack meaningfulness.

In contrast, servant leader characteristics at level-1 explained an additional 25.16% of the variance in psychological empowerment, beyond that of an individual's proactive personality. This result is positive, significant, and meaningful, because it supports one of the foundational tenets of servant leadership, that servant leaders are able to empower their followers (Greenleaf, 1977). Through a focus on follower development, satisfying their needs, and helping them acquire self-actualization, servant leaders empower their followers to engage in positive behaviors (Van Dierendonck, 2011; Van Dierendonck & Patterson, 2010). Taken together, the positive relationships between servant leader characteristics at the individual level; and psychological empowerment and proactive work behaviors indicate that servant leaders may facilitate autonomous behavior in their followers.

In addition, psychological empowerment was found to mediate the relationship between servant leader characteristics at level-1 and the four proactive work behaviors. Psychological empowerment was a partial mediator for problem prevention and taking charge. It fully mediated the relationship between servant leader characteristics at level-1 and individual innovation. Servant leader characteristics were indirectly related to voice via psychological empowerment. Overall, these results show that servant leaders typically have an effect on positive outcomes by increasing their followers' motivational state (Ehrhart, 2004; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Searle & Barbuto, 2011; Van Dierendonck, 2011; Walumbwa, Hartnell, & Oke, 2010). Psychological

empowerment generally was found to mediate the relationship between servant leader characteristics at level-1 and proactive work behaviors.

Results from this study showed that servant leader characteristics at the group level were non-significant predictors of the four proactive outcomes, or to psychological empowerment. Results showed that groups that had supervisors who displayed higher servant leader characteristics on average, to all of their direct reports, did not predict the four proactive work behaviors or psychological empowerment. There was no incremental benefit to belonging to a group that had a supervisor who, on average, exhibited more servant leader characteristics to the entire group.

This is contrary to previous research that has shown servant leadership at the group level as having positive impacts (Ehrhart, 2004; Walumbwa, Hartnell, & Oke, 2010). Previous studies, however, only looked at servant leadership at the group level; while this study examined the incremental effect. These results show evidence for the notion that what matters most, is if the individual perceives their supervisor as having servant leader characteristics, regardless of what others in their group may think. In addition, psychological empowerment did not mediate the relationship because there was no relationship to mediate. Nor was it considered an indirect effect because there was not a relationship between servant leader characteristics at the group level and psychological empowerment at the individual level.

Contributions of This Study

This study contributes to multiple streams of research within the field of organizational science. This study provides data to help better understand the antecedents of four proactive work behaviors: problem prevention, individual innovation, voice, and

taking charge. Both individual differences and contextual differences were examined as possible antecedents. First, this study adds to the understanding of proactive personality. Specifically, this study explains the process by which proactive personality is related to the four proactive work behaviors. Psychological empowerment was found to both fully and partially mediate the relationship between proactive personality, and proactive work behaviors. This study helps researchers understand the contextual antecedents of proactive work behaviors. Servant leadership was used as a predictor at both the individual and group levels. Previous work had not considered servant leadership as a contextual antecedent.

Second, this study adds to the empirical evidence on servant leadership. Servant leadership has largely been an intuitive idea that has been talked about for decades. Only recently have scholars started to empirically examine its foundational tenets (Barbuto & Wheeler, 2006; Ehrhart, 2004; Liden, Wayne, Zhao, & Henderson, 2008; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Walumbwa, Hartnell, & Oke, 2010). This study found that servant leader characteristics at level-1 were positively related to psychological empowerment and four proactive work behaviors. This empirical examination lends some support for the foundational tenet that servant leader characteristics help followers increase in autonomy, independence, and positive behavior (Greenleaf, 1977; Searle & Barbuto, 2011; Van Dierendonck, 2011).

Finally, this study is one of the first cross-level investigations of servant leadership. This was done by examining the incremental impact that servant leader characteristics at level-2 have over viewing servant leadership only as a level-1 phenomenon. The incremental effect of servant leader characteristics was not supported

in this study. Belonging to a work group that displayed higher levels of servant leadership characteristics did not seem to have an effect on the individual level outcomes, above and beyond, that of the individual level servant leader characteristics. The number of groups in this study (i.e., 113 supervisors) was consistent with previous work done on servant leadership (Ehrhart, 2004; Walumbwa, Hartnell, & Oke, 2010). However, one possible reason for the non-significant relationship could be the low group mean reliability (i.e., ICC(2)), which was found in the preliminary analyses. Future research may consider examining groups that exceed five direct reports per supervisor.

Strengths of the Study

This study had several strengths, as well as limitations. The strengths will be discussed first, and then some of the limitations will be discussed. The first strength is the fact that data was gathered from two different sources. The independent variables were gathered from the direct reports, and the dependent variables were gathered from supervisors. This reduced the problem of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

The second strength is the explicit nature in which the multilevel issue was addressed from the beginning of this study. Scholars have advocated that multilevel issues should be addressed in the theoretical/conceptual model, measurement, analysis and inferences (Yammarino, Dionne, Chun, & Dansereau, 2005). Rather than simply addressing the multilevel issue in the statistical analyses, this study sought to recognize the multilevel issue from the beginning. This study proposed a multilevel conceptual model, which explicitly recognizes the multilevel nature of examining followers nested within leaders (Snijders & Bosker, 1999). Conceptualizing a multilevel model in the

conceptualization/theory stage of the research process is in line with recommendations by leading leadership scholars (Dansereau & Yammarino, 1998a; Klein, Dansereau, & Hall, 1994; Yammarino, Dionne, Chun, & Dansereau, 2005).

Furthermore, the multilevel issue was addressed in the measurement stage. This study measured the shared properties of groups by aggregating individual (i.e., direct reports perceptions of their supervisor's leadership style) data only after having run the appropriate and necessary tests (i.e., ICC1, ICC, and $r_{wg(j)}$, which showed group consensus (Klein & Kozlowski, 2000). Third, a multilevel analysis was used that distinguishes the variance due to individual differences and the variance do to contextual differences (Bliese & Hanges, 2004). It also allowed for the group variance to be accounted for by potential predictors.

Finally, the multilevel issue was addressed in the inferences of the results reported. This was done by not inappropriately making inferences from the individual level to the group and organizational level (Kozlowski & Klein, 2000). Results showed that servant leader characteristics were positively related to individual level outcomes (i.e., psychological empowerment and four proactive behaviors). It would be an error to assume that because servant leader characteristics were positively related at the individual level, they would also be positively related at the group and organizational level. This study showed, that the group level of servant leadership was not positively related with the individual level outcomes. This study sought to deal with the multilevel nature of examining leaders and direct reports by explicitly recognizing it in theory/conceptual modeling, measurement, analysis and inference (Yammarino, Dionne, Chun, & Dansereau, 2005).

Finally, this study used an appropriate sample size of 113 supervisors to examine the group level effect of servant leader characteristics. This is similar to previous leading research on servant leadership that used 123 leaders (Walumbwa, Hartnell, & Oke, 2010), 120 leaders (Ehrhart, 2004), and substantially more than 17 leaders used in one study (Liden, Wayne, Zhao, & Henderson, 2008).

Limitations of the Study

As with any study, this study also had some limitations. The first limitation was the cross-sectional nature of the project. Leaders are seen as individuals that have certain characteristics or behaviors that facilitate positive outcomes in their followers. Ideal leaders are able to help facilitate change. However, to truly examine change in followers, a longitudinal study is needed. Cross-sectional studies only consider one point in time, and cannot track the change in behavior of direct reports over time. This study does not address the possibility that direct reports have always felt empowered and their level of empowerment do not decrease or increase in relation to their supervisor's characteristics or behaviors.

The second limitation is the correlational nature of this study. Results from this study do not show causation of the independent variables and dependent variables. None of the variables were experimentally manipulated, nor were participants randomly assigned to participate in the survey. Rather, employees from three departments received a survey. Because this study lacked an experimental procedure, results show only that the variables are correlated, rather than a causation path model.

The third limitation is the lack of ethnic diversity in the sample. The majority of the sample was Caucasian. In addition, this sample lacked heterogeneity in organizations

that were used. Only a large public organization participated in this study, thus results should be interpreted appropriately.

The fourth limitation is the fact that the variables used in this study are all latent constructs, which makes it impossible to observe. For example, group variables can measure global or shared properties. Variables that are derived from global properties can be observed and are objective. Variables from shared group properties are derived from the aggregate perceptions of group members. These types of variables are subjective and unobservable.

The final limitation is that the amount of variance being predicted by the independent variables in this study is relatively small, with the exception being servant leader characteristics at level-1 predicting 25.16% of the variance of psychological empowerment. The relationships in this study largely were positive, significant, and explained a small amount of variance.

Recommendations

Future research is needed to continue to examine both the individual and contextual antecedents of proactive work behaviors. First, researchers could design longitudinal designs to see if servant leader characteristics at level-1 continue to be positively related to followers' outcomes over time. This would allow researchers to examine the central tenet of servant leadership, that followers are developed over time because of their association with a servant leader. Longitudinal studies allow researchers to begin to track change over time.

Second, researchers need to continue to examine cross-level models of servant leadership. This study is the second known cross-level research study on servant

leadership (Walumbwa, Hartnell, & Oke, 2010). Researchers need to continue to explore if servant leadership at the group-level has an incremental benefit to individuals. For example, “Is it most important for an individual to perceive their supervisor as having servant leader characteristics?” Or, “Is their also an additive benefit to belonging to a group that has a supervisor that displays an ‘average leadership style’ of servant leadership?” Does it benefit direct reports to belong to a group that has a supervisor who displays servant leader characteristics to the majority of their direct reports?

Third, future research needs to examine if the positive relationships in this study hold across cultures. Technology has allowed our economy to become global, rather than regional. Leaders, know more than ever, and lead different types of individuals across cultures and nations. Researchers must examine servant leadership and its consequences across individuals of varying ethnicities and cultures. Are there some cultures where servant leadership is less effective? Are their some cultures where servant leadership is more effective? These and other questions are needed to examine the potential global impact of servant leadership.

Fourth, researchers need to perform qualitative studies that examine the process by which servant leadership facilitates empowerment within direct reports. This type of research could examine both direct reports, and servant leaders through conducting interviews. Data from the interview could then be analyzed using qualitative techniques to look for overarching themes. A qualitative research agenda allows researchers to gain the perspective of direct reports on how the servant leader characteristics of their supervisor influenced their empowerment. Also, a qualitative study could examine the perspective of supervisors. This would allow research to understand the intentional

behaviors supervisors used to facilitate an increase in direct reports' empowerment. An understanding of the process by which empowerment is increased could help researchers design a leader development curriculum that enhances supervisors' servant leader behaviors.

Fifth, researchers need to examine the development of a servant leadership style. How do supervisors acquire servant leader characteristics? Can these characteristics be acquired by other supervisors desiring to increase their leadership abilities? What types of curriculum and experiential activities are best in facilitating the development of servant leadership? These and other developmental questions need to be examined. In addition, researchers need to examine the role that values, beliefs, and natural talents play in supervisors displaying servant leader characteristics. There is a possibility that servant leader characteristics stem from deep beliefs that a supervisor has of the inherent goodness of individuals.

Sixth, researchers need to examine the boundaries of servant leadership. For example, are their certain types of organizations or contexts in which servant leader characteristics flourish? Are their organizations or contexts that servant leaders may struggle in? Researchers also need to examine potential negatives of servant leadership. For example, does increasing a direct report's empowerment have negative ramifications? Does an overemphasis on follower development lead to too much follower autonomy, and a neglect of organizational needs? These types of questions have the potential to illustrate both the weaknesses and strengths of a servant leadership style of leadership.

Finally, researchers may examine the impact servant leader characteristics have on different types of performance (i.e., adaptive, proficient, and proactive performance). Scholars have found positive relationship between servant leadership and in-role performance (Liden, Wayne, Zhao, & Henderson, 2008). This study found a positive relationship between servant leader characteristics and proactive work behaviors. Future research needs to examine if servant leader characteristics are better suited for facilitating in-role performance, adaptive performance, or proactive performance. Because of the relatively small percentage of variance explained in the proactive work behaviors, it seems likely that servant leader characteristics might be best suited for increasing in-role and adaptive performance, rather than proactive performance.

Conclusion

This study examined the contextual and individual differences as antecedents to four proactive work behaviors: problem prevention, individual innovation, voice, and taking charge. Results were reported that showed proactive personality was positively related to individual innovation, voice, and taking charge. Servant leader characteristics at level-1 were related to each of the four proactive behaviors. Servant leader characteristics at level-1 and proactive personality also significantly predicted psychological empowerment. Servant leader characteristics at level-1 explained an additional 25% of the variance in psychological empowerment. Finally, psychological empowerment was also found to mediate the relationship between the independent variables and each of the four proactive work behaviors.

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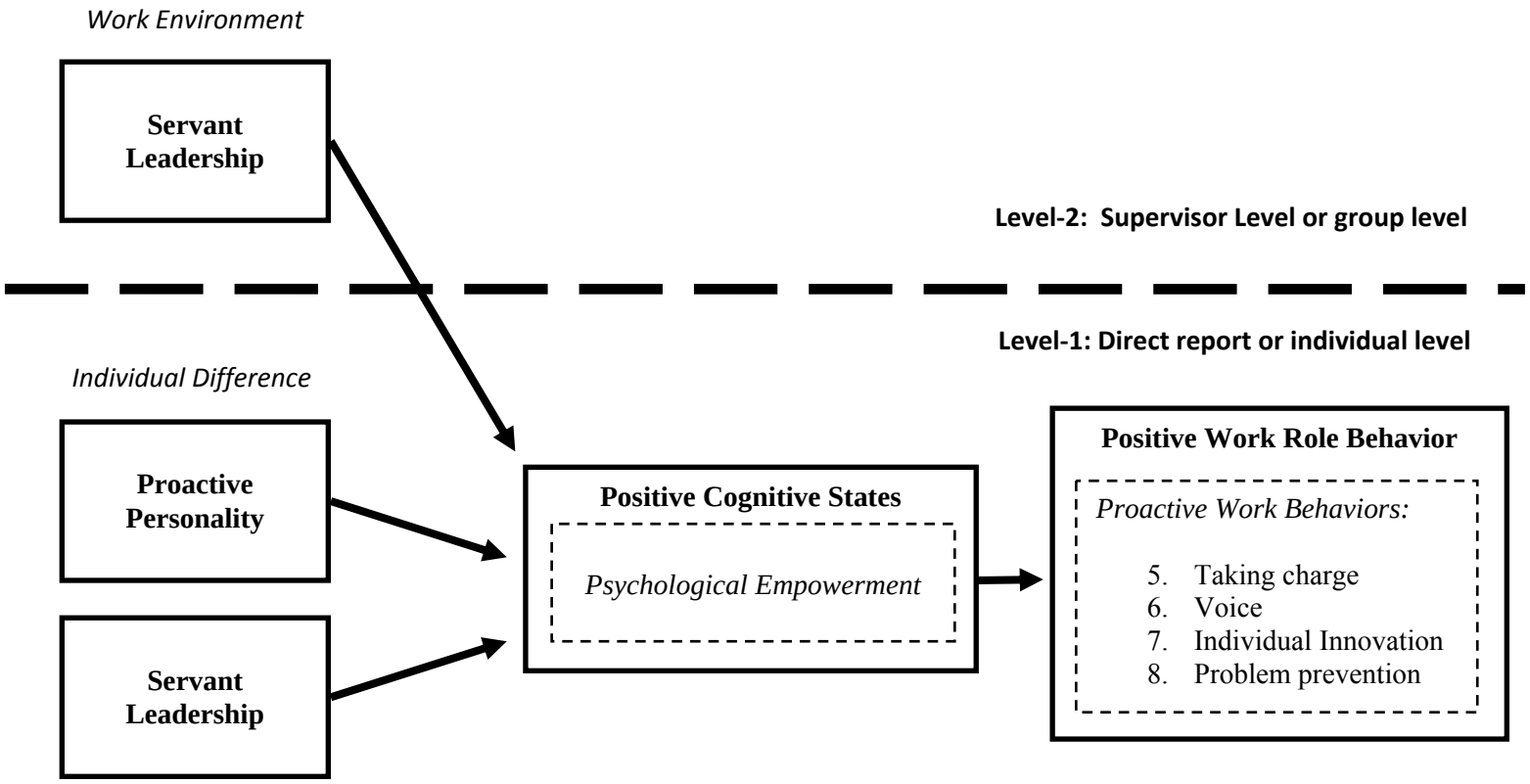

Figure 1: Multilevel conceptual model showing individual differences and contextual differences as antecedents.

Table 1
Results of Factor Analysis of the Hypothesized Measurement Model

Items	Servant Leadership						Trait
	ALT	EMO	PER	WIS	ORG	SL	TPROA
[Supervisor name] person puts my best interests ahead of his/her own.	.86						
[Supervisor name] does everything he/she can to serve me.	.88						
[Supervisor name] sacrifices his/her own interests to meet my needs.	.88						
[Supervisor name] goes above and beyond the call of duty to meet my needs.	.90						
[Supervisor name] is one I would turn to if I had a personal trauma.		.83					
[Supervisor name] is good at helping me with my emotional issues.		.95					
[Supervisor name] is talented at helping me to heal emotionally.		.96					
[Supervisor name] is one that could help me mend my hard feelings.		.90					
[Supervisor name] always seems alert to what's happening around him/her.			.80				
[Supervisor name] is good at anticipating the consequences of decisions.			.74				
[Supervisor name] has awareness of what's going on around him/her.			.86				
[Supervisor name] seems very in touch with what is happening around him/her.			.90				
[Supervisor name] seems to know what's going on around him/her			.92				
[Supervisor name] offers compelling reasons to get me to do things.				.90			
[Supervisor name] encourages me to dream 'big dream' about the organization.				.81			
[Supervisor name] is very persuasive.				.97			
[Supervisor name] is good at convincing me to do things.				.96			
[Supervisor name] is gifted when it comes to persuading me.				.95			
[Supervisor name] believes that the organization needs to play a moral role in society.					.82		
[Supervisor name] believes that our organization needs to function as a community.					.88		
[Supervisor name] sees the organization for its potential to contribute to society.					.89		
[Supervisor name] encourages me to have a community spirit in the workplace.					.80		
[Supervisor name] is preparing the organization to make a positive difference in the future.					.86		
Altruistic dimension						.86	
Emotional healing dimension						.80	
Persuasive mapping						.84	
Wisdom						.74	
Organizational stewardship						.82	
I am constantly on the lookout for new ways to improve my life.							.55
Wherever I have been, I have been a powerful force for constructive change.							.62
Nothing is more exciting than seeing my ideas turn into reality.							.61
If I see something I don't like, I fix it.							.60
No matter what the odds, if I believe in something I will make it happen.							.72
I love being a champion for my ideas, even against others' opposition.							.69
I excel at identifying opportunities.							.82
I am always looking for better ways to do things.							.59
If I believe in an idea, no obstacle will prevent me from making it happen.							.71
I can spot a good opportunity long before others can.							.65

Table 1
Results of Factor Analysis of the Hypothesized Measurement Model
(continued)

Items	Psychological Empowerment					Proactive Work Behaviors			
	MEA	COM	SEL	IMP	EMP	PRE	INN	VOC	TAK
The work I do is very important to me.	.80								
My job activities are personally meaningful to me.	.94								
The work I do is meaningful to me.	.95								
I am confident about my ability to do my job.		.85							
I am self-assured about my capabilities to perform my work activities.		.92							
I have mastered the skills necessary for my job.		.62							
I have significant autonomy in determining how I do my job.			.75						
I can decide on my own how to go about doing my work.			.91						
I have considerable opportunity for independence and freedom in how I do my job.			.89						
My impact on what happens in my department is large.				.79					
I have a great deal of control over what happens in my department.				.97					
I have significant influence over what happens in my department.				.96					
Meaning dimension of empowerment					.51				
Competence dimension of empowerment					.43				
Self-determination of empowerment					.74				
Impact dimension of empowerment					.77				
How frequently does [direct report name] try to develop procedures and systems that are effective in the long term, even if they slow things down to begin with?						.85			
How frequently does [direct report name] try to find the root cause of things that go wrong?						.78			
How frequently does [direct report name] spend time planning how to prevent reoccurring problems?						.84			
How frequently does [direct report name] generate creative ideas?							.85		
How frequently does [direct report name] search out new techniques, technologies and/or product ideas							.79		
How frequently does [direct report name] promote and champion ideas to others?							.79		
How frequently does [direct report name] communicate their views about work issues to others in the workplace, even if their views differ and others disagree with them?								.70	
How frequently does [direct report name] speak up and encourage others in the workplace to get involved with issues that affect them?								.72	
How frequently does [direct report name] keep well informed about issues where their opinion might be useful to their workplace?								.80	
How frequently does this person speak up with new ideas or changes in procedures?								.88	
How frequently does [direct report name] try to bring about improved procedures in their workplace?									.90
How frequently does [direct report name] try to institute new work methods that are more effective?									.87
How frequently does [direct report name] try to implement solutions to pressing organization problems?									.82

ALT=Altruistic calling; EMO=Emotional healing; PER=Persuasive mapping; WIS=Wisdom; ORG=Organizational stewardship; SL=Servant leadership; TPROA=Proactive personality; MEA=Meaning; COM=Competence; SEL=Self-determination; IMP=Impact; EMP=Empowerment; PRE=Problem prevention; INN=Individual Innovation; VOC=Voice; TAK=Taking charge. n=410 *all factor loading are significant at p<.001.

Table 2
Intercorrelations and Reliabilities of Latent Factors

		1	2	3	4	5	6	7	8
1	Servant Leader Characteristics (Level-1)	(.96)							
2	Servant Leader Characteristics (Level-2)	.64	(.42)						
3	Proactive Personality	.28	.17	(.88)					
4	Psychological Empowerment	.55	.35	.39	(.88)				
5	Problem Prevention	.31	.26	.17	.30	(.86)			
6	Individual Innovation	.23	.17	.22	.25	.76	(.85)		
7	Voice	.21	.18	.20	.22	.72	.79	(.86)	
8	Taking Charge	.26	.19	.20	.29	.82	.85	.79	(.90)
n=410; all correlations are significant at p<.001									

Table 3
Results for Discriminant Validity Analyses

Model	$\chi^2(df)$	$\Delta\chi^2(\Delta df)^a$	CFI	RMSEA	SRMR
7-factor (Measurement Model)	3142.72(1566)	-	.93	.05	.05
6-factor (SL+EMP)	10486.89(1583)	6310.30(17)*	.57	.12	.12
6-factor (EMP+TPROA)	7097.99(1579)	3955.27(13)*	.73	.09	.11
5- factor (SL+EMP+TPROA)	1177.96(1588)	8628.23(22)*	.53	.51	.11
4-factor (PREV+INN+VOC+TAK)	4176.60(1583)	1033.87(17)*	.88	.06	.10
2-factor (SL+EMP+TPROA) and (PREV+INN+VOC+TAK)	11889(1596)	8746.71(30)*	.50	.13	.13

CFI=comparative fit index; SRMR=standardized root-mean square residual; RMSEA=root-mean-square error of approximation
SL=Servant leadership; EMP=Psychological empowerment; TPROA=Proactive personality; PREV=Problem prevention; INN=Individual Innovation; VOC=Voice; TAK=Taking charge
[a] All alternative models are compared to the 7-factor model.
n=410. *p<.001.

Table 4
Multilevel Modeling for Problem Prevention

Variable	Problem Prevention				
	1	2	3	4	5
Intercept	2.39	2.83	2.56	2.81	2.07
Individual Differences (Level-1)					
Age	-.01*	-.01**	-.01*	-.01**	-.01*
Time w/ supervisor	-.00	.00	-.02	-.01	-.00
Interaction w/ supervisor	.18*	.09	.15*	.10	.09
Education level	.06*	.07	.08	.08**	.07*
Job Tenure	-.01	-.01	-.01	-.01	-.00
Org. Tenure	.01	.01	.01	.01	.01
Proactive Personality		.11		.04	.11
Empowerment			.32***	.21**	
Servant Leadership		.30***		.20**	.24***
Contextual Diffeneces (Level-2)					
Servant Leadership					.23
Random Effects					
$\sigma^{2\,a}$	.69	.65	.63	.63	.65
$\tau_{00}{}^{b}$	.28	.20	.24	.21	.21
$R^{2\,c}$	6.67	11.36	13.74	13.65	11.80

n=410 (Level 1, direct reports); n=113 (Level 2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level 1 intercept
[c] The percent of level 1 variance explained by all independent variables included in the model.

Table 5
Multilevel Modeling for Individual Innovation

Variable	Individual innovation				
	1	2	3	4	5
Intercept	2.45	2.70	2.62	2.69	2.26
Individual Differences (Level-1)					
Age	-.01**	-.01**	-.01**	-.01**	-.01**
Time w/ supervisor	-.03	-.00	-.05	-.03	-.03
Interaction w/ supervisor	.11	.07	.09	.07	.07
Education level	.11***	.11***	.12***	.12***	.11***
Job Tenure	-.01	-.01	.00	-.01	-.01
Org. Tenure	.00	.00	.00	.00	.00
Proactive Personality		.20**		.14*	.16*
Empowerment			.27***	.16**	
Servant Leadership		.20**		.12	.17*
Contextual Diffeneces (Level-2)					
Servant Leadership					.13
Random Effects					
$\sigma^{2\,a}$		.59	.59	.58	.20
$\tau_{00}{}^{b}$		.20	.20	.19	.59
$R^{2\,c}$	10.47	16.07	15.58	16.96	16.14

n=410 (Level 1, direct reports); n=113 (Level 2, supervisors); *p<.05; **p<.01; ***p<.001

[a] Individual level residual variance; [b] Between-group variance in the level 1 intercept

[c] The percent of level 1 variance explained by all independent variables included in the model.

Table 6
Multilevel Modeling for Voice

Variable	Voice				
	1	2	3	4	5
Intercept	2.97	3.18	3.10	3.17	2.69
Individual Differences (Level-1)					
Age	-.00	-.00	-.01	-.00	-.00
Time w/ supervisor	-.00	.00	-.03	-.00	-.01
Interaction w/ supervisor	.07	.03	.01	.03	.03
Education level	.08*	.08**	.09*	.08*	.08**
Job Tenure	-.00	-.00	-.00	-.00	-.00
Org. Tenure	.00	.00	.00	.00	.00
Proactive Personality		.15**	.	.11*	.15**
Empowerment			.21***	.11	
Servant Leadership		.16**		.11	.12*
Contextual Diffeneces (Level-2)					
Servant Leadership					.15
Random Effects					
$\sigma^{2\,a}$	.58	.56	.56	.55	.56
$\tau_{00}{}^{b}$	.14	.11	.12	.11	.11
$R^{2\,c}$	1.36	4.48	2.22	4.96	4.48

n=410 (Level 1, direct reports); n=113 (Level 2, supervisors); *p<.05; **p<.01; ***p<.001

[a] Individual level residual variance; [b] Between-group variance in the level 1 intercept

[c] The percent of level 1 variance explained by all independent variables included in the model.

Table 7
Multilevel Modeling for Taking Charge

Variable	Taking Charge				
	1	2	3	4	5
Intercept	1.88	2.21	2.06	2.18	1.68
Individual Differences (Level-1)					
Age	-.01***	-.01***	-.01***	-.01***	-.01***
Time w/ supervisor	.00	.01	.01	.01	.01
Interaction w/ supervisor	.20*	.13	.16*	.14*	.13
Education level	.12***	.11***	.13***	.13***	.11***
Job Tenure	-.00	-.00	-.00	-.01	-.00
Org. Tenure	.00	.00	.00	.00	.00
Proactive Personality		17*		.10	.17**
Empowerment			.32***	.22***	
Servant Leadership		.24***		.13*	.20**
Contextual Diffeneces (Level-2)					
Servant Leadership					.16
Random Effects					
$\sigma^{2\,a}$	.66	.63	.61	.61	.62
$\tau_{00}{}^{b}$	.22	.19	.18	.18	.19
$R^{2\,c}$	11.19	16.98	18.21	18.78	17.13

n=410 (Level 1, direct reports); n=113 (Level 2, supervisors); *p<.05; **p<.01; ***p<.001

[a] Individual level residual variance; [b] Between-group variance in the level 1 intercept

[c] The percent of level 1 variance explained by all independent variables included in the model.

Table 8
Multilevel Modeling for Psychological Empowerment

Variable	Psychological Empowerment			
	1	2	3	4
Intercept (γ_{00})	4.93	4.70	5.59	5.85
Individual Differences (Level-1)				
Age	.00	.00	.00	.00
Time w/ supervisor	.03	.05	.05	.05
Interaction w/ supervisor	.10	.13*	-.03	-.03
Education level	-.03	-.04	-.04	-.04
Job Tenure	-.00	-.00	.00	-.00
Org. Tenure	.00	.00	.01*	.01*
Proactive Personality		.51***	.35***	.35**
Servant Leadership			.50***	.52***
Contextual Diffeneces (Level-2)				
Servant Leadership				-.07
Random Effects				
$\sigma^{2\,a}$	.68	.54	.40	.40
$\tau_{00}{}^{b}$	.10	.09	.08	.08
$R^{2\,c}$	.00	19.64	39.85	39.88

n=416 (Level 1, direct reports); n=113 (Level 2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level 1 intercept
[c] The percent of level 1 variance explained by all independent variables included in the model.

Table 9
Summary of Hypothesized Findings

	Independent Variables	Mediating Variable	Dependent Variables	Conclusion
Hypothesis 1	Proactive		Problem Prevention	Supported
	Proactive		Individual innovation	Supported
	Proactive		Voice	Supported
	Proactive		Taking Charge	Supported
Hypothesis 2	Empower		Problem Prevention	Supported
	Empower		Individual innovation	Supported
	Empower		Voice	Supported
	Empower		Taking Charge	Supported
Hypothesis 3	Proactive		Empower	Supported
Hypothesis 4	Proactive	Empower	Problem Prevention	Full
	Proactive	Empower	Individual innovation	Part
	Proactive	Empower	Voice	Part
	Proactive	Empower	Taking Charge	Full
Hypothesis 5	SL (level-1)		Problem Prevention	Supported
	SL (level-1)		Individual innovation	Supported
	SL (level-1)		Voice	Supported
	SL (level-1)		Taking Charge	Supported
Hypothesis 6	SL (level-2)		Problem Prevention	NS
	SL (level-2)		Individual innovation	NS
	SL (level-2)		Voice	NS
	SL (level-2)		Taking Charge	NS
Hypothesis 7	SL (level-1)		Empower	Supported
Hypothesis 8	SL (level-2)		Empower	No
Hypothesis 9	Proactive and SL(level-1)	Empower	Problem Prevention	Part=SL Indirect=PP
	Proactive and SL(level-1)	Empower	Individual innovation	Part=PP Full=SL
	Proactive and SL(level-1)	Empower	Voice	Indirect=SL Direct=PP
	Proactive and SL(level-1)	Empower	Taking Charge	Part=SL Full= PP
Hypothesis 10	SL (level-2)	Empower	Problem Prevention	NS
	SL (level-2)	Empower	Individual innovation	NS
	SL (level-2)	Empower	Voice	NS
	SL (level-2)	Empower	Taking Charge	NS

SL (level-1) or SL= servant leader characteristics at level-1; SL (level-2)= servant leader characteristics at level -2; proactive or PP=proactive personality; Empower=Psychological Empowerment; NS=Not Supported

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Appendix A: Tables and Figures

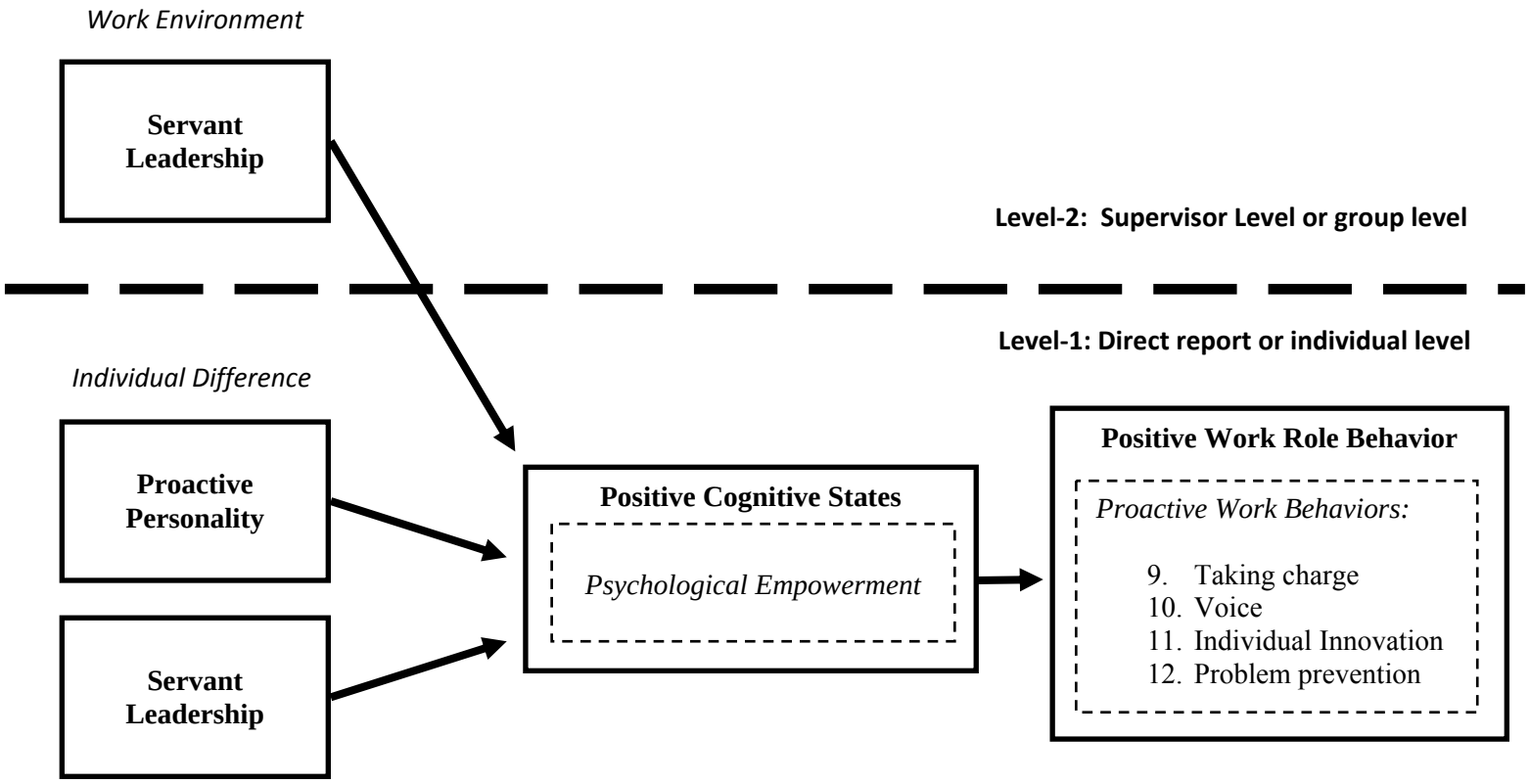

Figure 1: Multilevel conceptual model showing individual differences and contextual differences as antecedents.

Table 1
Conceptualization of Servant Leadership

	Graham (1991)	**Spears (1995)**	**Farling, Stone, & Winston (1999)**	**Russell & Stone (2002)**	**Patterson (2003)**
Characteristics of Servant Leader	6. Vision 7. Humble 8. Relational power 9. Service-oriented 10. Common good	11. Listening 12. Empathy 13. Healing 14. Awareness 15. Persuasion 16. Conceptualization 17. Foresight 18. Stewardship 19. Commitment to the growth of people 20. Building community	6. Vision 7. Influence 8. Credibility 9. Trust 10. Service	Nine functional attributes: 10. Vision 11. Honesty 12. Integrity 13. Trust 14. Service 15. Modeling 16. Pioneering 17. Appreciation of others 18. Empowerment Eleven attributes: 12. Communication 13. Credibility 14. Competence 15. Stewardship 16. Visibility 17. Influence 18. Persuasion 19. Listening 20. Encouragement 21. Teaching 22. Delegation	8. Agapao love 9. Humility 10. Altruistic 11. Vision 12. Trusting 13. Serving 14. Empowers followers

Table 2
Comparison of Servant Leadership Measurements

	Laub (1999)	Page & Wong, (2000)	Patterson (2003)	Barbuto & Wheeler (2006)	Sendjaya, Sarros, & Santora (2008)	Liden, Wayne, Zhao, & Henderson (2008)
Items	60 items	23 items	25 items	23 items	35 items	28 items
Dimensions	6 subscales (α=.91-.93)	3 dimensions (α=.89-.97)	5 dimensions (α=.77-.94)	5 dimensions (α=.82-.92)	6 dimensions (α=.72-.93)	7 dimensions(α=.76-.86)
Names of subscales	• Values people • Develops people • Builds community • Displays authenticity • Provides leadership • Shares leadership	• Empowerment • Service • Vision	• Love • Empowerment • Vision • Humility • Trust	• Altruistic calling • Persuasion mapping • Emotional healing • Wisdom • Organizational Stewardship	• Voluntary subordination • Authentic self • Covenantal relationships • Responsible morality • Transcendental Spirituality • Transforming influence	• Conceptual skills • Empowering • Helping subordinates grow and succeed • Putting subordinates first • Behaving ethically • Emotional healing • Creating value for the community
Content validity:	Literature, expert panel	Literature	Literature, expert panel	Literature, expert panel	Literature, interviews with 15 experts	Literature, expert panel
Criterion validity	Job satisfaction	None	None	• Extra work • Employee satisfaction • Organizational effectiveness	None	• Community citizenship behaviors • In-role performance • Organizational commitment
EFA	Yes (n=828)	Yes (n=514)	Yes (n=300)	Yes (n=388)	No	Yes (n=298)
CFA	No	No	No	Yes (n=80)	Yes (n=277)	Yes (n=182)
Convergent and divergent validity	None	None	None	Yes (i.e., transformational leadership and LMX)	None	Yes (i.e., transformational leadership and LMX)
Distinguishing feature	Organizational level of servant-leadership			First try to establish convergent and divergent validity, CFA, and substantial criterion validity.	Added a spirituality and responsible moral dimension	Established convergent and divergent validity, CFA, and criterion validity. Added empowering, and helping others succeed dimensions.

Table 3
Results of Factor Analysis of the Hypothesized Measurement Model

Items	Servant Leadership						Trait
	ALT	EMO	PER	WIS	ORG	SL	TPROA
[Supervisor name] person puts my best interests ahead of his/her own.	.86						
[Supervisor name] does everything he/she can to serve me.	.88						
[Supervisor name] sacrifices his/her own interests to meet my needs.	.88						
[Supervisor name] goes above and beyond the call of duty to meet my needs.	.90						
[Supervisor name] is one I would turn to if I had a personal trauma.		.83					
[Supervisor name] is good at helping me with my emotional issues.		.95					
[Supervisor name] is talented at helping me to heal emotionally.		.96					
[Supervisor name] is one that could help me mend my hard feelings.		.90					
[Supervisor name] always seems alert to what's happening around him/her.			.80				
[Supervisor name] is good at anticipating the consequences of decisions.			.74				
[Supervisor name] has awareness of what's going on around him/her.			.86				
[Supervisor name] seems very in touch with what is happening around him/her.			.90				
[Supervisor name] seems to know what's going on around him/her			.92				
[Supervisor name] offers compelling reasons to get me to do things.				.90			
[Supervisor name] encourages me to dream 'big dream' about the organization.				.81			
[Supervisor name] is very persuasive.				.97			
[Supervisor name] is good at convincing me to do things.				.96			
[Supervisor name] is gifted when it comes to persuading me.				.95			
[Supervisor name] believes that the organization needs to play a moral role in society.					.82		
[Supervisor name] believes that our organization needs to function as a community.					.88		
[Supervisor name] sees the organization for its potential to contribute to society.					.89		
[Supervisor name] encourages me to have a community spirit in the workplace.					.80		
[Supervisor name] is preparing the organization to make a positive difference in the future.					.86		
Altruistic dimension						.86	
Emotional healing dimension						.80	
Persuasive mapping						.84	
Wisdom						.74	
Organizational stewardship						.82	
I am constantly on the lookout for new ways to improve my life.							.55
Wherever I have been, I have been a powerful force for constructive change.							.62
Nothing is more exciting than seeing my ideas turn into reality.							.61
If I see something I don't like, I fix it.							.60
No matter what the odds, if I believe in something I will make it happen.							.72
I love being a champion for my ideas, even against others' opposition.							.69
I excel at identifying opportunities.							.82
I am always looking for better ways to do things.							.59
If I believe in an idea, no obstacle will prevent me from making it happen.							.71
I can spot a good opportunity long before others can.							.65

Table 3
Results of Factor Analysis of the Hypothesized Measurement Model
(continued)

Items	Psychological Empowerment					Proactive Work Behaviors			
	MEA	COM	SEL	IMP	EMP	PRE	INN	VOC	TAK
The work I do is very important to me.	.80								
My job activities are personally meaningful to me.	.94								
The work I do is meaningful to me.	.95								
I am confident about my ability to do my job.		.85							
I am self-assured about my capabilities to perform my work activities.		.92							
I have mastered the skills necessary for my job.		.62							
I have significant autonomy in determining how I do my job.			.75						
I can decide on my own how to go about doing my work.			.91						
I have considerable opportunity for independence and freedom in how I do my job.			.89						
My impact on what happens in my department is large.				.79					
I have a great deal of control over what happens in my department.				.97					
I have significant influence over what happens in my department.				.96					
Meaning dimension of empowerment					.51				
Competence dimension of empowerment					.43				
Self-determination of empowerment					.74				
Impact dimension of empowerment					.77				
How frequently does [direct report name] try to develop procedures and systems that are effective in the long term, even if they slow things down to begin with?						.85			
How frequently does [direct report name] try to find the root cause of things that go wrong?						.78			
How frequently does [direct report name] spend time planning how to prevent reoccurring problems?						.84			
How frequently does [direct report name] generate creative ideas?							.85		
How frequently does [direct report name] search out new techniques, technologies and/or product ideas							.79		
How frequently does [direct report name] promote and champion ideas to others?							.79		
How frequently does [direct report name] communicate their views about work issues to others in the workplace, even if their views differ and others disagree with them?								.70	
How frequently does [direct report name] speak up and encourage others in the workplace to get involved with issues that affect them?								.72	
How frequently does [direct report name] keep well informed about issues where their opinion might be useful to their workplace?								.80	
How frequently does this person speak up with new ideas or changes in procedures?								.88	
How frequently does [direct report name] try to bring about improved procedures in their workplace?									.90
How frequently does [direct report name] try to institute new work methods that are more effective?									.87
How frequently does [direct report name] try to implement solutions to pressing organization problems?									.82

ALT=Altruistic calling; EMO=Emotional healing; PER=Persuasive mapping; WIS=Wisdom; ORG=Organizational stewardship; SL=Servant leadership; TPROA=Proactive personality; MEA=Meaning; COM=Competence; SEL=Self-determination; IMP=Impact; EMP=Empowerment; PRE=Problem prevention; INN=Individual innovation; VOC=Voice; TAK=Taking charge. n=410 *all factor loading are significant at p<.001.

Table 4
Results for Discriminant Validity Analyses

Model	$\chi^2(df)$	$\Delta\chi^2(\Delta df)^a$	CFI	RMSEA	SRMR
7-factor (Measurement Model)	3142.72(1566)	-	.93	.05	.05
6-factor (SL+EMP)	10486.89(1583)	6310.30(17)*	.57	.12	.12
6-factor (EMP+TPROA)	7097.99(1579)	3955.27(13)*	.73	.09	.11
5- factor (SL+EMP+TPROA)	1177.96(1588)	8628.23(22)*	.53	.51	.11
4-factor (PREV+INN+VOC+TAK)	4176.60(1583)	1033.87(17)*	.88	.06	.10
2-factor (SL+EMP+TPROA) and (PREV+INN+VOC+TAK)	11889(1596)	8746.71(30)*	.50	.13	.13

CFI=comparative fit index; SRMR=standardized root-mean square residual; RMSEA=root-mean-square error of approximation
SL=Servant leadership; EMP=Psychological empowerment; TPROA=Proactive personality; PREV=Problem prevention; INN=Individual innovation; VOC=Voice; TAK=Taking charge
[a] All alternative models are compared to the 7-factor model.
n=410. *p<.001.

Table 5
Intercorrelations and Reliabilities of Latent Factors

		1	2	3	4	5	6	7	8
1	Servant Leader Characteristics (Level-1)	(.96)							
2	Servant Leader Characteristics (Level-2)	.64	(.42)						
3	Proactive Personality	.28	.17	(.88)					
4	Psychological Empowerment	.55	.35	.39	(.88)				
5	Problem Prevention	.31	.26	.17	.30	(.86)			
6	Individual innovation	.23	.17	.22	.25	.76	(.85)		
7	Voice	.21	.18	.20	.22	.72	.79	(.86)	
8	Taking Charge	.26	.19	.20	.29	.82	.85	.79	(.90)

n=410; all correlations are significant at p<.001

Table 6
Multilevel Modeling for Problem Prevention

Variable	Problem Prevention						
	1	2	3	4	5	6	7
Intercept	2.39	2.28	2.56	2.52	2.83	2.07	2.81
Individual Differences (Level-1)							
Age	-.01*	-.01*	-.01*	-.01**	-.01**	-.01*	-.01**
Time w/ supervisor	-.00	.00	-.02	-.02	.00	-.00	-.01
Interaction w/ supervisor	.18*	.19**	.15*	.15*	.09	.09	.10
Education level	.06*	.06	.08	.08**	.07	.07*	.08**
Job Tenure	-.01	-.00	-.01	-.01	-.01	-.00	-.01
Org. Tenure	.01	.01	.01	.01	.01	.01	.01
Proactive Personality		.20***		.05	.11	.11	.04
Empowerment			.32***	.30***			.21**
Servant Leadership					.30***	.24***	.20**
Contextual Diffeneces (Level-2)							
Servant Leadership						.23	
Random Effects							
$\boldsymbol{\sigma^{2\,a}}$	.69	.67	.63	.63	.65	.65	.63
$\boldsymbol{\tau_{00}}^{b}$	.28	.26	.24	.24	.20	.21	.21
$\boldsymbol{R^{2\,c}}$	6.67	8.36	13.74	13.53	11.36	11.80	13.65

n=410 (Level-1, direct reports); n=113 (Level-2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model..

Table 7
Multilevel Modeling for Individual innovation

Variable	Individual innovation						
	1	2	3	4	5	6	7
Intercept	2.45	2.34	2.62	2.53	2.70	2.26	2.69
Individual Differences (Level-1)							
Age	-.01**	-.01**	-.01**	-.01**	-.01**	-.01**	-.01**
Time w/ supervisor	-.03	-.02	-.05	-.03	-.00	-.03	-.03
Interaction w/ supervisor	.11	.14*	.09	.10	.07	.07	.07
Education level	.11***	.10***	.12***	.12***	.11***	.11***	.12***
Job Tenure	-.01	-.01	.00	-.01	-.01	-.01	-.01
Org. Tenure	.00	.00	.00	.00	.00	.00	.00
Proactive Personality		.26***		.14*	.20**	.16*	.14*
Empowerment			.27***	.22***			.16**
Servant Leadership					.20**	.17*	.12
Contextual Diffeneces (Level-2)							
Servant Leadership						.13	
Random Effects							
$\sigma^{2\,a}$	.63	.60	.59	.58	.59	.20	.58
$\tau_{00}{}^{b}$	.23	.23	.20	.20	.20	.59	.19
$R^{2\,c}$	10.47	15.00	15.58	17.03	16.07	16.14	16.96

n=410 (Level-1, direct reports); n=113 (Level-2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model.

Table 8
Multilevel Modeling for Voice

Variable	Voice						
	1	2	3	4	5	6	7
Intercept	2.97	2.88	3.10	3.01	3.18	2.69	3.17
Individual Differences (Level-1)							
Age	-.00	-.00	-.01	-.00	-.00	-.00	-.00
Time w/ supervisor	-.00	-.01	-.03	-.00	.00	-.01	-.00
Interaction w/ supervisor	.07	.07	.01	.06	.03	.03	.03
Education level	.08*	.07**	.09*	.08**	.08**	.08**	.08*
Job Tenure	-.00	-.00	-.00	-.00	-.00	-.00	-.00
Org. Tenure	.00	.00	.00	.00	.00	.00	.00
Proactive Personality		.21***	.	.12**	.15**	.15**	.11*
Empowerment			.21***	.17**			.11
Servant Leadership					.16**	.12*	.11
Contextual Diffeneces (Level-2)							
Servant Leadership						.15	
Random Effects							
$\sigma^{2\,a}$	.58	.56	.56	.55	.56	.56	.55
$\tau_{00}{}^{b}$	.14	.13	.12	.12	.11	.11	.11
$R^{2\,c}$	1.36	3.82	2.22	5.40	4.48	4.48	4.96

n=410 (Level-1, direct reports); n=113 (Level-2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model.

Table 9
Multilevel Modeling for Taking Charge

Variable	Taking Charge						
	1	2	3	4	5	6	7
Intercept	1.88	1.76	2.06	1.99	2.21	1.68	2.18
Individual Differences (Level-1)							
Age	-.01***	-.01**	-.01***	-.01***	-.01***	-.01***	-.01***
Time w/ supervisor	.00	.01	.01	.00	.01	.01	.01
Interaction w/ supervisor	.20*	.22*	.16*	.17*	.13	.13	.14*
Education level	.12***	.12***	.13***	.13***	.11***	.11***	.13***
Job Tenure	-.00	-.01	-.00	-.00	-.00	-.00	-.01
Org. Tenure	.00	.00	.00	.00	.00	.00	.00
Proactive Personality		.24***		.10	17*	.17**	.10
Empowerment			.32***	.29***			.22***
Servant Leadership					.24***	.20**	.13*
Contextual Diffeneces (Level-2)							
Servant Leadership						.16	
Random Effects							
$\sigma^{2\,a}$	.66	.64	.61	.61	.63	.62	.61
$\tau_{00}{}^{b}$	.22	.22	.18	.19	.19	.19	.18
$R^{2\,c}$	11.19	14.76	18.21	18.81	16.98	17.13	18.78

n=410 (Level-1, direct reports); n=113 (Level-2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model.

Table 10
Multilevel Modeling for Psychological Empowerment

Variable	Psychological Empowerment			
	1	2	3	4
Intercept (γ_{00})	4.93	4.70	5.59	5.85
Individual Differences (Level-1)				
Age	.00	.00	.00	.00
Time w/ supervisor	.03	.05	.05	.05
Interaction w/ supervisor	.10	.13*	-.03	-.03
Education level	-.03	-.04	-.04	-.04
Job Tenure	-.00	-.00	.00	-.00
Org. Tenure	.00	.00	.01*	.01*
Proactive Personality		.51***	.35***	.35**
Servant Leadership			.50***	.52***
Contextual Diffeneces (Level-2)				
Servant Leadership				-.07
Random Effects				
$\sigma^{2\,a}$	.68	.54	.40	.40
$\tau_{00}{}^{b}$	.10	.09	.08	.08
$R^{2\,c}$	.00	19.64	39.85	39.88

n=410 (Level-1, direct reports); n=113 (Level-2, supervisors); *p<.05; **p<.01; ***p<.001
[a] Individual level residual variance; [b] Between-group variance in the level-1 intercept
[c] The percent of level-1 variance explained by all independent variables included in the model.

Table 11
Summary of Hypothesized Findings

	Independent Variables	Mediating Variable	Dependent Variables	Conclusion
Hypothesis 1	Proactive		Problem Prevention	Supported
	Proactive		Individual innovation	Supported
	Proactive		Voice	Supported
	Proactive		Taking Charge	Supported
Hypothesis 2	Empower		Problem Prevention	Supported
	Empower		Individual innovation	Supported
	Empower		Voice	Supported
	Empower		Taking Charge	Supported
Hypothesis 3	Proactive		Empower	Supported
Hypothesis 4	Proactive	Empower	Problem Prevention	Full
	Proactive	Empower	Individual innovation	Part
	Proactive	Empower	Voice	Part
	Proactive	Empower	Taking Charge	Full
Hypothesis 5	SL (level-1)		Problem Prevention	Supported
	SL (level-1)		Individual innovation	Supported
	SL (level-1)		Voice	Supported
	SL (level-1)		Taking Charge	Supported
Hypothesis 6	SL (level-2)		Problem Prevention	NS
	SL (level-2)		Individual innovation	NS
	SL (level-2)		Voice	NS
	SL (level-2)		Taking Charge	NS
Hypothesis 7	SL (level-1)		Empower	Supported
Hypothesis 8	SL (level-2)		Empower	No
Hypothesis 9	Proactive and SL(level-1)	Empower	Problem Prevention	Part=SL Indirect=PP
	Proactive and SL(level-1)	Empower	Individual innovation	Part=PP Full=SL
	Proactive and SL(level-1)	Empower	Voice	Indirect=SL Direct=PP
	Proactive and SL(level-1)	Empower	Taking Charge	Part=SL Full= PP
Hypothesis 10	SL (level-2)	Empower	Problem Prevention	NS
	SL (level-2)	Empower	Individual innovation	NS
	SL (level-2)	Empower	Voice	NS
	SL (level-2)	Empower	Taking Charge	NS

SL (level-1) or SL= servant leader characteristics at level-1; SL (level-2)= servant leader characteristics at level -2; proactive or PP=proactive personality; Empower=Psychological Empowerment; NS=Not Supported

Appendix B: Institutional Review Board Letter of Approval

Sent By: IRB NUgrant System
Sent On: 01/07/2011 06:13 pm
Reference: IRBProjectForm - 15093
Subject: Official Approval Letter for IRB project #11391
Message: January 5, 2011

Travis Searle
Agricultural Leadership, Education and Communication
3320 Starr St #1 Lincoln, NE 68503

John Barbuto Jr
Agricultural Leadership, Education and Communication
300 AGH, UNL, 68583-0709

IRB Number: 20110111391EP
Project ID: 11391
Project Title: A MULTILEVEL EXAMINATION OF PROACTIVE WORK BEHAVIORS: CONTEXTUAL AND INDIVIDUAL DIFFERENCES AS ANTECEDENTS

Dear Travis:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the BoardÂ's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with this institutionÂ's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46). Your project was approved as an Expedited protocol, category 7.

You are authorized to implement this study as of the Date of Final Approval: 01/05/2011. This approval is Valid Until: 01/04/2012.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:
* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
* Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
* Any breach in confidentiality or compromise in data privacy related to the subject or others; or
* Any complaint of a subject that indicates an unanticipated risk or that cannot be

resolved by the research staff.

For projects which continue beyond one year from the starting date, the IRB will request continuing review and update of the research project. Your study will be due for continuing review as indicated above. The investigator must also advise the Board when this study is finished or discontinued by completing the enclosed Protocol Final Report form and returning it to the Institutional Review Board.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

William G. Thomas

William Thomas, Ph.D.
Chair for the IRB

Appendix C: Direct Report Survey Instrument

Proactive Personality
1=strongly disagree; 2=disagree; 3=disagree somewhat; 4=Undecided/neutral; 5=agree somewhat; 6=agree; 7=strongly agree

1. I am constantly on the lookout for new ways to improve my life.
2. Wherever I have been, I have been a powerful force for constructive change.
3. Nothing is more exciting than seeing my ideas turn into reality.
4. If I see something I don't like, I fix it.
5. No matter what the odds, if I believe in something I will make it happen.
6. I love being a champion for my ideas, even against others' opposition.
7. I excel at identifying opportunities.
8. I am always looking for better ways to do things.
9. If I believe in an idea, no obstacle will prevent me from making it happen.
10. I can spot a good opportunity long before others can

Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. *Journal of Applied Psychology, 84*(3), 416-427.

Psychological Empowerment
1=strongly disagree; 2=disagree; 3=disagree somewhat; 4=Undecided/neutral; 5=agree somewhat; 6=agree; 7=strongly agree

1. The work I do is very important to me.
2. My job activities are personally meaningful to me.
3. The work I do is meaningful to me.
4. I am confident about my ability to do my job.
5. I am self-assured about my capabilities to perform my work activities.
6. I have mastered the skills necessary for my job.
7. I have significant autonomy in determining how I do my job.
8. I can decide on my own how to go about doing my work.
9. I have considerable opportunity for independence and freedom in how I do my job.
10. My impact on what happens in my department is large.
11. I have a great deal of control over what happens in my department.
12. I have significant influence over what happens in my department.

Key: meaning 1, 2, 3; competence 4, 5, 6; self-determination 7, 8, 9; impact: 10, 11, 12

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *The Academy of Management Journal, 38*(5), 1442-1465.

Servant Leader Characteristics:
(Follower rating of their leader's servant leader characteristics)

1=never; 2=rarely; 3=sometimes; 4=often; 5=always

1. [Supervisors name] puts my best interests ahead of his/her own.
2. [Supervisors name] does everything he/she can to serve me.
3. [Supervisors name] sacrifices his/her own interests to meet my needs.
4. [Supervisors name] goes above and beyond the call of duty to meet my needs.
5. [Supervisors name] is one I would turn to if I had a personal trauma.
6. [Supervisors name] is good at helping me with my emotional issues.
7. [Supervisors name] is talented at helping me to heal emotionally.
8. [Supervisors name] is one that could help me mend my hard feelings.
9. [Supervisors name] always seems to be alert to what's happening around him/her.
10. [Supervisors name] is good at anticipating the consequences of decisions.
11. [Supervisors name] has awareness of what's going on around him/her.
12. [Supervisors name] seems very in touch with what is happening around him/her.
13. [Supervisors name] seems to know what's going on around him/her.
14. [Supervisors name] offers compelling reasons to get me to do things.
15. [Supervisors name] encourages me to dream "big dreams" about the organization.
16. [Supervisors name] is very persuasive.
17. [Supervisors name] is good at convincing me to do things.
18. [Supervisors name] is gifted when it comes to persuading me.
19. [Supervisors name] believes that the organization needs to play a moral role in society.
20. [Supervisors name] believes that our organization needs to function as a community.
21. [Supervisors name] sees the organization for its potential to contribute to society.
22. [Supervisors name] encourages me to have a community spirit in the workplace.
23. [Supervisors name] is preparing the organization to make a positive difference in the future.

Key:

Altruistic Calling: 1, 2, 3, 4,
Emotional Healing: 5, 6, 7, 8,
Wisdom: 9, 10, 11, 12 13
Persuasive mapping: 14, 15, 16, 17, 18
Organizational Stewardship: 19, 20, 21, 22, 23

Barbuto, J. E., & Wheeler, D. W. (2006). Scale development and construct clarification of servant leadership. *Group & Organization Management, 31*(3), 300-326.

Demographics

1. What is the highest level of education you have completed?
    a. Less than high school
    b. High school/GED
    c. 2 year college degree (Associates)
    d. 4 year college degree (BS or BA)
    e. Some graduate work
    f. Master's degree
    g. Doctoral degree
    h. Professional Degree (MD, JD)
2. How long has [supervisor's name] been your leader?
    a. 0-6 months
    b. 7-12 months
    c. 1-3 years
    d. 4-6 years
    e. 7-10 years
    f. 11-15 year
    g. 16-20 years
    h. 21-25 years
    i. More than 25 years
3. How often do you interact with [supervisor's name]?
    a. 1-3 times a day
    b. 1-3 times a week
    c. 1-3 times a month
    d. 1-3 times a year

Appendix D: Supervisor Survey Instrument

Proactive work behaviors
1=very infrequently; 2=somewhat infrequently; 3=Undecided/Neutral; 4=somewhat frequently; 5=very frequently

1. How frequently does [direct report name] try to develop procedures and systems that are effective in the long term, even if they slow things down to begin with?
2. How frequently does [direct report name] try to find the root cause of things that go wrong?
3. How frequently does [direct report name] spend time planning how to prevent reoccurring problems?
4. How frequently does [direct report name] generate creative ideas?
5. How frequently does [direct report name] search out new techniques, technologies and/or product ideas?
6. How frequently does [direct report name] promote and champion ideas to others?
7. How frequently does [direct report name] communicate their views about work issues to others in the workplace, even if their views differ and others disagree with them?
8. How frequently does [direct report name] speak up and encourage others in the workplace to get involved with issues that affect them?
9. How frequently does [direct report name] keep well informed about issues where their opinion might be useful to their workplace?
10. How frequently does [direct report name] speak up with new ideas or changes in procedures?
11. How frequently does [direct report name] try to bring about improved procedures in their workplace?
12. How frequently does [direct report name] try to institute new work methods that are more effective?
13. How frequently does [direct report name] try to implement solutions to pressing organization problems?

Key:
Problem prevention: 1, 2, 3,
Individual innovation: 4, 5, 6,
Voice: 7, 8, 9, 10
Taking charge: 11, 12, 13

Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management, 36*(3), 633-662.