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ANTECEDENTS OF TRANSACTIONAL, TRANSFORMATIONAL,
AND SERVANT LEADERSHIP:
A CONSTRUCTIVE-DEVELOPMENT THEORY APPROACH

by

Marilyn J. Bugenhagen

A DISSERTATION

University of Nebraska

Doctor of Philosophy

Major: Human Sciences (Leadership Studies)

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December 2006

Lincoln, Nebraska

ANTECEDENTS OF TRANSACTIONAL, TRANSFORMATIONAL,
AND SERVANT LEADERSHIP:
A CONSTRUCTIVE-DEVELOPMENT THEORY APPROACH

Marilyn J. Bugenhagen, Ph.D.

University of Nebraska, 2006

Adviser: John E. Barbuto, Jr.

This field study examined the antecedents of transactional, transformational, and servant leadership behaviors measured on continuum of constructive-development development theory.

Data collected from 54 leaders and 409 followers from community and educational leadership programs across the United States. A multi-level analysis conducted using hierarchical linear modeling combining leaders' perception of their leadership behaviors, followers rating of leaders' behaviors and measure of leaders' level of constructive-development order.

Using the Multifactor Leadership Questionnaire (Avolio & Bass, 2004) and Servant Leadership Questionnaire (Barbuto & Wheeler, 2006) and correlated with constructive-development Order using the Subject-Object Interview (Kegan, 1982; Lahey, Souvaine, Kegan, Goodman, & Felix, 1988) several results related leaders' behaviors and exchange processes between leaders and followers.

One finding study suggests leaders acknowledged the overuse of managing others based upon rules, standards, and past mistakes in their self-ratings. Leaders' use of active management-by-exception may impact his/her response to followers' failures, mistakes, and adherence to standards. This overuse of rules, standards, and past failures may result from leaders' perceptions of what others ask of their ability to 'be' leaders.

At constructive-development Third Order, leaders' in this study showed strong belief in providing developmental activities for followers (individual consideration). Coupled with the finding on active management-by-exception, followers may not consider leaders' activity as developmental but more for the preservation of the organization and its systems.

Leaders also believed they provided stimulation to followers in their organizations for innovation and creativity to solve problems in new ways (intellectual stimulation).

One attributes of servant leadership behavior was significant in this study Followers' indicated a leader's wisdom, (awareness and foresight), had a positive connection with leader's constructive-development Order.

As one of few known studies of leader's behaviors and constructive-development theory, this research holds promise for longitudinal study and replication to increase the understanding of how leaders can rise to the behaviors as outlined in the transformational and servant leadership theories. This type of study could provide valuable information and insights for encouraging development of individuals and organizations who work on problems and processes in today's complex organizations.

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Dedication

My partner and spouse, Dan, and I had always joked about one day moving from the titles of Mr. and Mrs. Daniel Bugenhagen to Dr. Daniel and Dr. Marilyn Bugenhagen. One Ph.D. in the house is probably enough, as Dan has long since discovered that his calling is with high school teaching. But my calling has been for higher education teaching.

My work is dedicated to my friend, partner and amazing spouse, Dan. He has believed, supported, and encouraged me through the multiple job changes and advancements as well as a career change that has brought me to my true passion, teaching and helping others grow to their potential. (Funny how we return to our roots....I once had a school room in our basement as a child. Complete with teacher desk, student desks and chalkboard.....)

The work is further dedicated to my son, Jordan, who has been growing up along with my own growing on this journey (nearly half his life!). I hope that my perseverance serves as example of achievement comes with persistence, hard work and lots of love.

Acknowledgements

“The journey has always been about laughing together, loving each other, seeking adventure, believing in our dreams and making a difference.....but sometimes we forget.” ~anonymous This quote has been on the signature of my email for well over fifteen years and sums up a life’s little reminder of what this journey is all about.

Thank you to my committee members who have been on this journey of ***‘believing in my dreams’*** for me through times when I wondered (as I’m sure they did), will I ever make the progress with all the starts and stops my doctoral study has undertaken. Thank you for believing in me and your wonderful patience: Dr. Jim King, who’s creativity and ability to ask penetrating questions has always served as inspiration for an ‘inquiring mind.’ Dr. Larry Dlugosh, who lent his support to my study as reader and clarifier. Dr. Susan Fritz, as an encourager of women to complete this journey and use the best thinking possible to reason through ‘why’ of the research. And to my adviser and friend, Dr. Jay Barbuto, who has been unwavering in his support and belief through all the trials of reaching this final point. From our weekly meetings on the phone, that faded when a parent’s illness took me away from progress on turning the Barbuto data set into a paper for publication, to the proposal of my program of study that was momentarily derailed when another parent became ill, and to finally the subsequent dedication to meet on the telephone nearly once a week to keep progress moving forward. I will miss my Tuesday calling and ‘playing’ Where’s Dr. Barbuto? ~ should I dial the work, home or cell number!?!

This accomplishment could not have become a reality had it not been for the support of several of my educational pursuit journey colleagues who were ***‘seeking***

adventure' along the way toward the goal! Many thanks to the 'technical' people who helped make this work including Beth with the Transcription Connection, Andrew of the NEAR center and my partners in rating the interviews, Nancy Popp and Patsy Dodd. For several undergraduate and graduate students who worked with me while I was on this journey and were willing to discuss and deeply think about how to understand this thing called "leading." Thanks for Melissa Sturm-Smith, Jane Klug, Jill Stohs, Heidi McBride, Molly Brown, and I'm sure I'm missing a few....

On the journey to '*making a difference*' I want to thank Dr. Stephen Summers and Dr. Brenda Rust, who served as early role models of working with college students and doing work that makes a difference for students and a campus. Their support and advising of me in my 'formative' years, was accented along the way by others whom I have had the pleasure to work with including Ron Buccholz, Lyn Jakobsen, Bill Smedick, Diane Podolske, Jon Dooley and Todd Vicker. Special thanks to Dr. Jim Griesen and Dr. Peg Blake, who were encouragers and BIG supporters of my journey to complete the Ph.D. Their strong sense of duty and contagion for commitment to higher education has been with me throughout this journey.

Any journey worth doing must have an element of enjoyment, even when things seem all too painful (well, mildly painful). It has always come down to an element of the ability to be '**laughing together.**' My dear colleague and long distance 'dissertation diva' Gina Matkin, deserves my sincerest gratitude for being on this journey with me and then ahead of me. Our parallels have been amazing and our future collaborations beckon us! Thanks to Randy Reinhart for supporting me in the 'dissertation week' and letting

me commiserate when necessary! And my furry friends in Lincoln, Hank, Graci and Annika!

The best journeys are done with those you love and hold dear. In the element of **'loving each other,'** I thank my departed dad, who though he didn't believe he had much of an impact on my life, would be proud to know that what he left in my hands after death, has enabled me to reach this academic milestone. For the love of my mother, Joyce, who "never worries about me," I thank for the support all along my educational pursuits. For my sister, Mary Ann, who is way smarter than me in many other areas of life, thanks for your support! For his love and willingness to wait until mom finishes her degree, I lovingly thank my son, Jordan, who's joy and boundless wonder serves as a model for future leaders. And to my loving partner and spouse, Dan. We have traversed the Midwest for over 29 years together in search of making a difference and growing our life together. Thank you for all you have done (twice!) to keep things together while I study and write. Our lives are so blessed and full because we have been willing to share in this journey. And to Sparky, the dog, for hanging out at my feet while I read and write, and would growl at me to remind me it's not time to move yet – read or write some more!

~ November 30, 2006

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CHAPTER I

Introduction and Statement of the Problem

The study of the antecedents of leadership behavior has received increased focus from the management and leadership fields. The studies include characteristics of effective leadership, effects of leadership practice, relationship between leader and follower, skills and personalities of leaders and components of particular theories. Focused study on leadership behaviors has looked at the actions and characteristics that provide an increased positive relationship between the leader and the follower. James MacGregor Burns (1978) introduced two categories of leadership behaviors, transactional and transformational, which have since received great attention in the leadership field, with research finding transformational receiving the most positive follower reaction. Another type of leadership behavior, servant leadership, has received great attention in the past decade and has highly regarded relationship characteristics mutually desired by leaders and followers, yet servant leadership lacks empirical research studies (Greenleaf, 1970).

Transactional and transformational leadership was first developed by Burns (1978) and extended by Benard Bass (1985); the concepts offered identities for the behaviors of leaders and the reactions of the followers to leader actions. Transactional leadership involves leaders giving followers something they desire in exchange for something the leader desires. These transactions engage leaders and followers in a mutual dependence of the relationship (Kellerman, 1984). Behaviors identified with transactional leadership include contingent reward, management-by-exception, and

laissez faire (Bass, 1985), though laissez faire is generally excluded as it identifies a lack of leadership action. Transactional leaders have several actions available to them in relationship to followers. These actions range from low-quality exchanges of goods and rights to high-quality transactions often enhanced by an interpersonal tie between the leader and follower (Landy, 1985).

Studies on transformational leadership report leadership stemming from the personal values and beliefs of the leader and not as an exchange between leader and follower. Built around Burn's (1978) definition of transformational leadership, the literature describes behaviors that deepen an understanding of the practice of this type of leadership (Bass, 1985; Bass & Avolio, 1990). Referred to as the four "I's" (Avolio, Waldman, & Yammarino, 1991), these characteristics provide a portrait of the actions a transformational leader utilizes to stimulate followers. Idealized influence (or charismatic influence) action helps the leader engage the followers' focus on the mission and vision of the organization. Inspirational motivation instills the sense of pride and encourages follower connection to the larger purpose of the organization. Intellectual stimulation unleashes the creativity of the follower and encourages thinking in new ways to solve old problems or dilemmas. Individual consideration focuses the leader on the unique aspects of each follower and seeks to meet their individual developmental needs as well as connect those followers who may be neglected by the organization.

The effects of transformational leadership reported in multiple studies, indicates that followers who defined their leaders as more transformational were also found to describe their organization as highly effective (Bass & Avolio, 1990). Leaders high in transformational leadership attain greatest performance from followers with leaders

providing inspiration to the followers toward new heights of success and increased ability to solve problems at higher performance levels (Bass, 1985; Yammarino & Bass, 1990). Though the outcomes and effects of transformational leadership are clear in the literature, little is known about how to understand the processes through which transformational leaders emerge.

The theory of servant leadership emerged when Greenleaf (1977) defined the role of the leader as servant. The leader as a person first responsible to serve others by being a seeker of the needs, wants and wishes of those to be served before aspiring to lead. Once they know how to support those they serve, the leader's obligation becomes to lift up those being served and while being served these 'followers' may decide to meet the needs of others through their own servant leader behavior. Greenleaf describes the servant leader (1970):

The servant-leader is servant first. . . . It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead The difference manifests itself in the care taken by the servant – first to make sure that other people's needs are being served. The best test, and difficult to administer, is: do those 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, 1970, p.13)

Self-interest does not motivate servant leadership; rather it may raise motivation

to a higher level (Greenleaf, 1977; Pollard, 1996). The development of others is the true focus of servant leaders (McMinn, 1989) while also seeking to serve and meet their needs (Russell & Stone, 2002). Though servant leadership continues to grow as a popular concept, much of the historical writings provide little in the way of definition and lacks empirical research to support the construct (Farling, Stone, & Winston, 1999). Servant leaders possess different personal values than non-servant leaders with personal values tied to the attributes of leadership behavior (Russell, 2000). Sendjaya and Sarros (2002) made the case for the view of servant leaders as stewards of the organization focused on empowering the potential of followers, but their work did not provide a distinction from other similar servant leader constructs. The scale development and construct clarification work on servant leadership advanced by Barbuto and Wheeler (2006) holds promise as a framework for supporting empirical study.

Academic work in the field of servant leadership has continued to grow and has established the need to distinguish the difference between transformational leadership and servant leadership. Most of the research done previously focuses on what a leader does in these types of leadership roles. The question that has arisen is how does a leader come to espouse these characteristics and actions in order to distinguish between these two constructs of leadership. Kuhnert and Lewis (1987) suggest that transactional and transformational theories of leadership development may be extended by using *constructive-development* theory to explain the differences in the way a leader develops his/her leadership style. Perhaps distinction can be made between servant and transformational leadership through the constructive-development lens and there by expand the understanding of the influence of leader's values and their effect on followers

and the organization.

The Constructive-development is predicated on the theory that individuals develop (construct) understanding from their experiences and these experiences shape (develop) their relationships with others and dictate their behavior in the world. The 'lens' with which the leader views the world is constructed within his/her meaning-making (understanding) gained through their experiences and this determines their way of being in the world and in relationship to others.

Research studies on antecedents of leadership have explored the ways a leader provides context for an organization, how the leader can be effective with followers, and how to promote organizational meaning and vision. Little research has sufficiently examined whether the developmental level of a leader has bearing on the leader's ability to perform within the context of various leadership theories – a readiness factor (Kegan, 1994). Further research may serve to inform the field on how to encourage the leader's growth in developmental level, allowing him/her to meet the challenges and demands of today's complex organizations.

Robert Kegan's work in constructive-development theory may promote the study of leadership with a 'new lens' and prove to be a break through in the area of understanding leaders' capacity and readiness for leader development training (Kuhnert & Lewis, 1987). Supervisors, followers and leader development trainers need to learn how to support growth and development based upon the leader's level of constructive-development. Instead of blaming leaders and followers for being unable to meet the demands of today's complex world of organizations and relationships (Kegan, 1994), leadership capacity needs to be determined to foster development of leaders and

followers. Further, increasing leaders' awareness of their own opportunities for developmental growth may increase the patience needed for leaders to endure the instability of the transition places between levels. Many stories of people who were great performers at their jobs, recognized for his/her talent and accomplishments, and thus promoted to a new level of leadership responsibility because of their achievement. These once great performers, now elevated to a new leadership role, now found to be ineffective, miserable and *in over their heads* (Kegan, 1994). While the talent may be there, the readiness of the individual to perform depends on his/her level of constructive-development. Kegan writes:

The expectations upon us. . .demand something more than mere behavior, the acquisition of specific skills, or the mastery of particular knowledge. They make demands on our minds, on *how* we know, on the complexity of our consciousness (1994, p. 5).

Purpose Statement

This study examined relationships among the antecedents of transactional, transformational, and servant leadership and a leader's level of constructive-development. Testing hypotheses regarding the relationship among each of the behaviors of transactional, transformational, and servant leadership and determining their place in the constructive-development theory. Leaders were assessed for their transactional, transformational and servant leadership behaviors and level of constructive-development. Raters, as identified by the leaders, assessed the leaders' for their transactional, transformational and servant behaviors.

Research Questions

1. What meaning does each leader construct from his/her experiences?
2. What level (from here defined as Order) of meaning-making does a leader bring to his/her experience as measured by the Subject-Object¹ Interview?
3. What is the relationship among the ways leaders experience leadership behaviors and their Order of constructive-development?
4. What is the relationship among the ways followers experience a leader's behaviors and measure of a leader's constructive-developmental Order?
5. For a leader to exhibit the behaviors of a servant leader, what constructive-development Order does the leader need?
6. What constructive-development Order does a leader hold who displays transactional leadership behaviors, as measured by the Multifactor Leadership Questionnaire?
7. What constructive-development Order does a leader hold who displays transformational leadership behaviors, as measured by the Multifactor Leadership Questionnaire?
8. What constructive-development Order does a leader hold who displays servant leadership behaviors, as measured by the Servant Leadership Questionnaire?
9. Do the specific dimensions of leadership behaviors, as measured or described by the Multifactor and Servant Leadership Questionnaires show up in different constructive-development Orders and/or transition points?

¹ The use of capital letters distinguish words with specific meaning utilized in the manuscript. Words like subject, object, order and particular numbers have other meanings in other contexts. Capital letters signal specific theoretical meaning for the purpose of this dissertation. Definition of terms found in Appendix A.

Delimitations and Limitations of the Study

This study extended the already existing theory and research that posits the connection between certain leadership styles, behaviors and perspectives that may in fact be an indication of specific cognitive stage of development (Fisher, Merron & Torbert, 1987; Torbert, 1987, 1991; Fisher & Torbert, 1991). Previous studies indicate that transformational and servant leadership behaviors are elicited with more complex thinking than transactional leadership behaviors (Kuhnert & Lewis, 1987; Russell & Kuhnert, 1992).

The study did not seek to create any type of intervention for leaders in terms of their constructive-development Order or leadership behaviors.

Significance of the Study

This study represented one of a few studies which focus specifically on the potential positive outcomes of the relationship among antecedents of transactional, transformational, and servant leadership behaviors and constructive-development Order. The study sheds light on the demands placed on the leader's ability to be effective in today's postmodern world the type of meaning-making required of individuals to lead in today's environment of complex organizations.

Successful leaders provide "a context in which all interested parties, the leader included, can together create a vision, mission, or purpose they can collectively uphold" (Kegan, 1994). The idea of collective vision, mission and purpose held among leader and followers presents a paradox that challenges the leader to contend with followers who may have a different idea of what leaders should do or be. When presented with a leader who invites the followers to share in the development of the direction, the leader may

find the followers shrieking in dismay that ‘we are here to follow you and you don’t have a plan!’ On the other hand, followers may realize that they are developmentally ahead of the leader’s level of thinking and be equally dismayed in the leader’s actions or lack of action needed to determine the organization’s direction.

In similar assertion, the writings of Greenleaf (1970, 1972, 1977) defined the role of the leader as servant. The leader is a person first, with responsibility to be the seeker of the needs, wants and wishes of others who will be served once the person aspires to lead and meet those needs. Once the person knows how to support those they have decided to serve, their obligation (call to leading) becomes to lift up those being served and while being served these ‘followers’ decide to meet the needs of others through their own servant leader behavior. Greenleaf’s way of conceptualizing leadership seems to leave little room for a transactional leader where relationship between leader and follower finds the leader pursuing their ends with little concern for others (Bass, 1985). Servant leadership encourages a more complex way of leading in first not leading, but serving the needs of others (a way of being developmental) and then choosing to lead while simultaneously encouraging and growing others to serve (another developmental behavior).

The connections between transformational and servant leadership arises in the focus of the leader. A transformational leader directs his/her focus on the organization and provides direction for followers to be concerned for the objectives of the organization. A servant leader directs his/her focus on the followers needs as primary with organizational objectives as secondary (Stone, Russell, & Patterson, 2004). This different focus on the organization speaks to the form of the context for the practice of

leadership and followership. This is a complex view of the leader's role focused outward with little concern for the needs of the self as leader.

Kegan suggests that in order for the leader to deal with the behaviors of followers and meet follower primary needs while transforming an organization, the leader must be able to handle a more complex view and be able to hold and evaluate the perspective of the followers along with his/her perspective as a leader. The complex view requires the leader to be able to step back, reflect on his/her own value system, on the needs and values of the followers as well as the direction of the organization, AND mediate decisions through this perspective taking. Transformative learning and understanding happens when someone changes, “not just the way he behaves, not just the *way* he feels, but the *way* he knows—not just what he knows but the *way* he knows” (Kegan, 1994, pg. 17).

This study sought to determine if leaders who demonstrate the behaviors of transactional, transformational and servant leaders construct meaning at differing Orders of constructive-development. Leaders making-meaning at different Orders would exhibit distinct leadership behaviors requiring leader development and coaching programs that foster leader capacity to advance their current Order of constructive-development to meet the demands of those they serve and the complexity of today's organizations. In turn, leaders who are more sensitive to the diversity of meaning-making systems of their followers should be able to create safe “holding environments” for follower development (Garvey Berger, 2003). Together, followers and leaders would be able to construct the direction of the organization. Leaders would assist the followers who desire to grow as leaders to develop the behaviors of transformational or servant leadership.

CHAPTER II

Review of Literature

Conceptual and Theoretical Foundations of this Study

This chapter examines the empirical data that emerged from the field. Before an overview of these findings, it is necessary to clarify the key concepts and theoretical foundations tied together in this study. The following concepts reviewed in this chapter.

- Transactional and Transformational Leadership (James MacGregor Burns (1978; Bernard Bass, 1985, 1990)
- Servant Leadership (Robert Greenleaf, 1970, 1972, 1977, 1998)
- Constructive-Development (Robert Kegan, 1982, 1994)

Creating the Context

Leadership development theories and research have illuminated the behaviors employed by leaders to move from transactional leadership to transformational and servant leadership behaviors. The leader's desire to aspire to serve others and encourage followers to become leaders who serve for the greater good, requires leadership beyond exchange between leader and follower. Many leader development programs, delivered by the management and leadership fields, offer the background, theory and 'how to' for those desiring to become transformational or servant leaders. The question that has arisen asks 'does a leader need to be cognitively capable of operating from a particular leadership frame of reference?' because there are no guarantees that he/she is developmentally ready to choose to do so (Amey, 1991). Transformational leaders use transactional methods to lead, though they possess the ability to understand the available

leadership options and to act in the manner that is most appropriate to the situation (Kuhnert & Lewis, 1987). Leaders at different developmental levels use different methods for constructing reality, and may include different approaches to leading. Research on the life-span experience has shown that adult development has various stages of ways of being in the world throughout life. (Souvaine, Lahey & Kegan, 1990; McAdams & de St. Aubin, 1998; Wolf, 2005). Expanding upon the research of Kuhnert & Lewis (1987), who suggested utilizing constructive-development theory as a framework for understanding the processes through which transactional and transformational leaders emerge, this study added the layer of servant leadership behaviors to the provocation that the effectiveness of leaders and of leader development interventions may depend heavily on the leader's constructive-development Order.

Research on Transactional and Transformational Leadership

In 1978, James MacGregor Burns differentiated between two types of leadership: transactional and transformational, in his now-classic book *Leadership*. Transactional leadership involves exchanges in which both the leader and followers are bound by a reciprocal exchange. The leader contracts with the follower for services or goods and once the transaction is complete, the two go their separate ways. This type of leadership, according to Burns, constitutes the bulk of our daily transactions in life.

Transformational leadership occurs when there is a relationship between the leader and the follower and where the leader encourages the growth and development of the follower. Inspired by the leader, followers transcend their own self-interest for a higher, collective purpose (Bass, 1985). According to Burns (1978), the relationship of mutual

stimulation and elevation occurs that converts followers into leaders and may convert leaders into moral agents. The leader and follower relationship can be transformed by their own leadership and further develop the leader's moral development. The transformational leader will be guided by Kohlberg's post-conventional thinking about human justice, integrity, and dignity (Burns, 1978). This differentiates the counterfeit transformational leadership style of Hitler and the authentic transformational leadership of a Gandhi. Burns writes:

In the organizational context, transformational leadership that is moral implies influencing change consistent with ethical principles of one's society and profession, of articulating and raising consciousness about authentic needs and inconsistencies and providing subordinates with the opportunity to understand and make choices (Burns, 1978, p 45).

Good transactional leaders are competent at manipulating the modal values or values of means such as honesty, responsibility, fairness, and the honoring of commitments, rendering the transactional leader as effective. Transformational leaders focus more on the end values, such as liberty, justice, and equality. Leaders with transformational behaviors seek to elevate their followers to higher levels of morality (Burns, 1978). The most effective leaders incorporate both transactional and transformational behaviors at appropriate times and in appropriate ways to followers (Bass, 1996). In Burns' proposal of an overarching theory of leadership emerges a generalized progression with transactional leadership skills and behaviors at one level

and transformational leadership skill and behaviors at the next level. This “full-range” leadership uses the characteristics of both transactional and transformational leader skill and behavior to be used in the ‘full’ dimension for leader effectiveness (Bass, 1996). Utilizing only transactional leadership dimensions found to be ineffective in the long-term motivation of followers and the leaders to meet the desired goals of the organization (Bass, 1996).

This progression aligns along the same levels of hierarchy found in Maslow’s (1954) hierarchy of needs. The transactional leader responds in kind to the follower’s desire for the reciprocal exchange of goods and services. When the leader and follower are satisfied with the type of transaction and are developmentally ready for a higher level of relationship, the exchange between the leader and the follower moves along to interaction that necessitates different behaviors of the leader and follower.

A meta-analytic review of the Multifactor Leadership Questionnaire, developed by Bass (1985), has been used in hundreds of published and unpublished (conference papers, technical reports, dissertations, etc.) research studies (Lowe & Kroeck, 1996). The studies focused on a wide variety of relationships between the leader, followers and the organization. Avolio, Waldman, and Einstein (1988) studied the relationship between transformational leadership, group process, and performance. Their findings show that the group, which had the more transformational leaders, significantly outperformed groups with leaders rated lower in transformational leadership. The later group members reported greater levels of satisfaction with the leadership. Other studies indicate positive relationships with transformational leadership relates positively to increased group process (Bass, Avolio, & Bebb, 1987; Avolio, Waldman, & Einstein, 1988); increased

work satisfaction (Singer & Singer, 1990); increased work productivity (Yammarino & Bass, 1990; Bass, 1985); and increased personal empowerment (Roberts, 1985).

Components of Transactional Leadership

Bass' (1980) research with senior executives asked participants' to describe their experiences with a transformational leader in their careers. Through the research and the literature on charisma and managerial leadership emerged the characteristics separating transactional and transformational leadership behaviors. Transactional leaders work with subordinates (followers) toward the desired outcomes by identifying the roles and tasks for the followers. These leaders clarify the requirements and performance outcomes providing the followers with the confidence needed to provide the effort for the task. These first order exchanges provide the motivation and energy for the followers to complete the task as directed by the leader, but are insufficient for sustaining performance that satisfies the needs of the followers. Transactional leadership as the act of an exchange of reward by the leader to the follower is an essential component of effective leadership, but is not sufficient. Transactional leadership behaviors divided into three factors.

1. Contingent Reward: provides clarification on what needs accomplishing and exchanges rewards for services.
 - Typical Exchange: "I understand that I will be rewarded for my efforts if I complete the following."
2. Management-by-exception Active: keeps an eye on follower performance and implements correction when standards are not upheld.

- Typical Exchange: “Report to me weekly on your progress toward our agreed goals. I’ll let you know if you are going in the right direction.”
3. Management-by-exception Passive: occurs only when standards are not upheld.
- Typical Exchange: Leader avoids giving feedback or instruction as progress is made and only intervenes if the expected standard is not met.

(Bass & Avolio, 1990)

Laissez faire leadership, identified in the literature as a “fourth” attribute, usually excluded in the research as it finds the leader absent in the relationship with the follower (Bass & Avolio, 1990). When tough decisions, conflict, or areas of responsibility call for the leader to step up or be involved in the issue, the leader can not be found. This level of unengaged behavior leaves the organization and its members to fend for themselves.

The leader and the follower exchange is based in transactional leadership with the expectation on the agreed outcomes and standards. The level of interaction and acceptance of responsibility by the leader for the actions of the followers varies from engaged to unengaged. In short, transactional leaders focus on the smooth function of the status quo, as defined by the institution (Bass, 1985; Bass & Avolio, 1990).

Components of Transformational Leadership

Studies identified four items describing leader behavior which were found to be transformational and built from Burn’s (1978) definition of transformational leadership (Bass 1985, Bass & Avolio, 1994). Referred to as the four “I’s” (Avolio, Waldman, & Yammarino, 1991), these inter-related characteristics provided a portrait of the

transformational leader behaviors used to stimulate followers. Each of the characteristics provides only part of a larger picture of the transformational leader and apart from one another are insufficient alone.

Four I's of Transformational Leadership:

1. **Idealized Influence:** Leader provides the vision for the organization and followers and inspires a sense of mission while instilling pride in the work. The leader gains trust, respect and confidence from the followers.
2. **Inspirational Motivation:** Leader communicates high expectations and uses symbols to focus the efforts of the organization and followers. The leader expresses the important purpose in simple ways. This results in enthusiasm and optimism and assists followers in envisioning future possibilities.
3. **Intellectual Stimulation:** The leader promotes the ability to look at old problems in new ways by promoting intelligence and rationality around problem solving. Creativity is stimulated through careful consideration of the problem and openness to viewing both the problem and solution in new ways – 'out of the box.'
4. **Individual Consideration:** Leader gives personal attention and treats each follower individually. The leader coaches, advises and assists the followers in their own leader development. Often he leader is found assisting those followers, neglected by the organization, to regain their value.

Studies show that transformational leaders engage followers in such a way that both the leader and followers raise one another to higher levels of motivation (Burns, 1978). Recent studies suggest that leaders who score high in their own goal internalization motivation and low on instrumental and self-concept external motivation are the most likely to exhibit transformational leadership behaviors (Barbuto, Fritz, & Marx, 2000). The effects of transformational leadership reported in multiple studies, indicates that followers who defined their leaders as more transformational were also found to describe their organization as highly effective (Bass & Avolio, 1994).

In transformational leadership, the strategy for the follower or the organization comes from the leader. The leader purposefully develops the followers and compels them through a vision, purpose and mission of the organization (Burns, 1978). The use of transformational leadership exhibits second order change that provides feedback from the leader to the group and causes them to shift their direction toward the focused goals and shared purpose. Studies show that followers reported exerting extra work effort for transformational leaders and less effort where the leader was only transactional (Bass & Avolio, 1994). The relationship with the leader had an affect on follower motivation. The transformational leader inspires follower's own development and fosters the followers to be engaged in the *moral* development of others (Burns, 1978). This engages the organization in a relationship of mutual stimulation and elevation that converts followers into leaders and produces highly effective organizational results.

Writings and Research on Servant Leadership

Robert Greenleaf's (1970) model of servant leadership is based upon leaders who put other people's needs, interests and aspirations above their own. The servant leader makes a conscious choice to serve others with his/her chief motive to serve first, then lead (Greenleaf, 1977). The servant leader moves beyond being transformational with the intent of transforming those being served to grow healthier, wiser, freer, more autonomous, and more likely themselves to become servants (Greenleaf, 1977).

Servant leaders in essence act as full time developers and trainers of the group membership. Their relationship with the followers is to help them do their best with their talents and skills (McMinn, 1989). The servant leader fosters a strategy for the organization that comes from the group and through the process of exploration, listening, and encouraging, assists the individual or group in a continuous review of direction, purpose and vision (Greenleaf, 1977, 1998). The followers are full participants in the decision making process of the organization, empowered to work together to set the direction (Stone, Russell, & Patterson, 2004).

In review of the writings of Greenleaf, Spears (1995, 2002) carefully considered the characteristics of the servant-leader. The characteristics discovered in the writings were:

1. Listening: silencing the inner voice to listen to what is and isn't said as well as regular use of reflection.
2. Empathy: striving to understand and empathize with others.
3. Healing: learning to heal the self and others to aid in transformation and integration.

4. Awareness: general and self-awareness. Aids in understanding of issues involving ethics and values.
5. Persuasion: relying on persuasion rather than positional authority in making decisions. Effective as a consensus builder within groups.
6. Conceptualization: looking at a problem and think beyond day-to-day realities. Stretch to encompass broader-based conceptual thinking.
7. Foresight: foreseeing the likely outcome of a situation, to understand lessons from the past, the realities of the present, and the likely consequences of a decision for the future. Rooted in the intuitive mind.
8. Stewardship: ‘holding something in trust for the greater good.’ A commitment to serving the needs of others.
9. Commitment to the growth of people: committed to the personal, professional, and spiritual growth of every individual in the organization.
10. Building community: seeking to identify a means for building community among those who work in the organization.

This list, not meant to be exhaustive, was to show the “power and promise to those open to its invitation and challenge” (Greenleaf, 1977, p. 7). Greenleaf (1972) and Spears (1995) assert that servant leaders go the next step and abandon self-interest in favor of the interests of those they serve.

Sendjaya and Sarros (2002), through their examination of servant leadership, found that servant leaders see themselves as stewards who develop and empower others to reach their potential. Barbuto and Wheeler (2002) postulated servant leadership was

comprised of eleven characteristics based on a review of influential works (e.g. Greenleaf, 1970; Spears, 1995). However, their research identified a missing key element, calling, not included in Spears' characteristics of servant leadership, but definitely aligned with Greenleaf's (1970) original writings.

Russell and Stone (2002) examined the literature and created a practical model for servant leadership, identifying functional attributes aligned with transformational leadership attributes (Figure 1).

Figure 2.1

Model for Transformational & Servant Leadership Functional Attributes

<u>Transformational Leadership</u>	<u>Servant Leadership</u>
Idealized Influence/charisma	Vision Trust Respect Risk sharing Integrity Modeling
Inspirational Motivation	Commitment to goals Communication Enthusiasm
Intellectual Stimulation	Rationality Problem solving
Individualized Consideration	Personal attention Mentoring Listening Empowerment

From "A Review of Servant Leadership Attributes: Developing a Practical Model," by C. J. Russell and A. G. Stone, 2002, *Leadership & Organizational Development Journal*, 23, vol. 3 / 4, p. 156.

Spiritual leadership has become a focus for increased writing and research (Fairholm, 1996). The literature draws a close linkage between the values-based transformational leadership and servant leadership with a greater emphasis on the moral aspects (Greenleaf, 1977; Burns, 1978; Covey, 1989; DePree, 1989; Fairholm, 1991; 1994; Vaill, 1998). This application of spiritual leadership in the work setting promotes the aspect of moral conduct. Elements of moral spiritual leadership include building shared values; vision setting; sharing meaning; enabling; influence and power; intuition; risk taking; service/servant hood; transformation; stewardship; and community (Fairholm, 1996).

Barbuto and Wheeler (2006) proposed five dimensions of servant leadership through the scale development of the Servant Leadership Questionnaire. The research originally supported eleven dimensions for the servant leadership scale including calling, listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, growth, and community building. Their initial research involved 80 leaders and 388 raters to test the internal consistency of the instrument, confirm factor structure, and assess validity.

Five servant leadership factors emerged from the results and were defined as:

1. Altruistic Calling

The motivation begins with a conscious choice to serve others in selfless and sacrificial ways. As the ultimate goal to serve, the leader puts others' interests ahead of his/her own.

2. Emotional Healing

The ability of the leader to recognize and initiate a healing process for the members of the organization as well as individuals. Leaders create environments where followers are safe in voicing professional and personal concerns.

3. Persuasive Mapping

The ability to conceptualize mental frameworks that map issues for greater opportunities for the organization. Leaders encourage others to envision the organization's direction and persuade them to take on responsibilities to achieve a particular direction.

4. Wisdom

Ability to sense cues from the environment and to conceptualize their implications on the members and the organization.

5. Organizational Stewardship

The effort of the leader to foster the sense of 'giving back' to the greater community and society through organizational efforts.

Significant relationships between transformational leadership dimensions, extra effort, satisfaction and organizational effectiveness were found within the same sample population (Barbuto & Wheeler, 2006). These results offer evidence of the strong relationship between transformational and servant leadership behaviors.

Servant leadership writings portray the leader as open and unobtrusive. Leaders use their experience and knowledge to build people up and equip them with the personal

development and learning in order to become leaders themselves. Similar to the Lao Tzu - described leader as mid-wife and guide on the side, not sage on the stage; servant leadership provides support for the followers to lead (Heider, 1985). The servant leader would find the highest of compliment in the voice of the people ‘we did it ourselves.’

Constructive-Development Theory

The constructive-development theory, developed by Robert Kegan (1982), is linked to Piaget’s (1972) work which made two powerful ideas evident – the idea of development in which human personality evolves qualitatively overtime with periods of stability and change; and the idea that constructivism amounts to the ability to construct an individual’s reality (Henderson & Kegan, 1989). The meaning-making system of the individual is understood as the development of the ways one constructs his/her understanding. An individual derives understanding, through growth and changes over the course of one’s life span and it signifies the manner in which one develops and organizes relationships to others and to the self (Perry, 1970). Focused not on “*what*” people know, but rather “*how*” they know, Piaget initially proposed this distinction as a way to understand development and cognitive reasoning in children. The conceptual construct was extended into adulthood as a model of development by researchers such as Kohlberg (1969), Perry (1970), Loevinger, (1976), Kegan (1982) and others for particular foci (e.g. Fowler, 1981; Gilligan, 1982; Belenky et al, 1986; Baxter Magolda, 1992, 1999).

The model of constructive-development, as applied to adults, proposes an evolving transitional life span that interacts with one’s environment while trying to make

sense of it. As an individual moves along the life span, one becomes more and more effective at making sense of more complex interactions and environments. The constructivist approach suggests that individuals may construct meaning and make sense of their experiences differently tomorrow than they will today. Since tomorrow, they will have had another day's worth of experiences (Eigel, 1998). The caution here is that the movement does not occur in the same manner for every individual and some individuals may stay in a certain place in their meaning-making system while others transition on. These constantly changing demands in our modern life may place many adults 'in over their heads' developmentally. Kegan's theory, first introduced in *The Evolving Self* (1982), was enhanced through longitudinal research (Kegan, 1994).

Constructive-Development Theory & Research

Kegan's model of constructive-development and in particular theory around adult development provides a picture of the many differing ways people have of being in the world and, in particular, the demands the world places on development and the capacity of adults to meet these demands. The theory describes the many different ways people have of meaning-making about the world. When people are able to hold their own and other ideas and ways of being and making meaning as different, potentially comprehensible, it opens up the possibility for deeper relationships and understanding. Instead of the regular way people have of understanding difference (which is to mistrust it or judge it wrong), there are more tools for understanding the world available both as leaders in organizations and in everyday lives (Garvey Berger, 2003).

Kegan (1994) believes that the constantly changing demands of modern society are likely developmentally inappropriate for many, perhaps even most adults, which puts them *in over their heads*. While being *in over their heads* is not a bad thing, society has proven not to be good at supporting and assisting people in their struggles with growth, particularly for adults (Kegan, 2001). Constructive-development theory invites consideration that instead of blaming adults for simply being unable to meet these demands, that learning how to support the development of adults and having the patience to wait for the growth to occur, can produce positive interactions in various environments. Kegan writes,

“The expectations upon us...demand something more than mere behavior, the acquisition of specific skills, or the mastery of particular knowledge. They make demands on our minds, on *how* we know, on the complexity of our consciousness” (Kegan, 1994, p.5).

Fundamental Assumptions of Constructive-Development Theory

Underlying constructive-development theory, exists five important and fundamental assumptions. First, the Orders of the mind not only refer to how one thinks, but more generally how one constructs reality from experience, which includes feeling, thinking, and relating to others. Secondly, the Orders are concerned with how one organizes the thinking, feeling and social relating rather than the content. Third, each Order represents a different Subject-Object relationship. The fourth assumption, postulates that each Order of the mind relates to the other. The transition from one Order

to another is not a replacement for the last Order, rather, the new Order now more complex and more inclusive than the subsequent Order. Lastly, Subject and Object are not fixed as what was Subject in one Order becomes Object in the next Order. This provides a developing ability to see or relate that which one was previously tied to, embedded in, and enmeshed with (Kegan, 1982). Adults begin to increase their understanding and way of making meaning about what they were formerly so strongly identified as part of one's existence.

Concept of Subject – Object

In constructive-development theory, individuals make meaning using an organizing principle based on the Subject-Object relationship. Things that are Subject to someone can't be seen because they are part of the person and experienced as unquestioned; as part of the self – taken for granted; taken for true or not taken at all. Something that's Subject *has* you (Kegan 1982). For example, the leader who believes all people are motivated in the same way – the way the leader is motivated. When followers fail to be motivated by the methods applied, the leader believes that the followers are the problem, after all the motivation method being utilized was such a great inspiration to get the job done (at least in the leader's eyes of what is motivating)! The leader's belief and experience in motivation are Subject to them. Not understanding there are different ways that people are motivated makes the leader powerless to change his/her style to meet the needs of the diversity of his/her work group (self).

Things become Object when one is aware of, can reflect upon, can tend to, take control of, internalize, and operate upon them. Things that are Subject have *you*, while

you have things that are Object. The more taken as Object in life, the more complex worldview because one can see and act upon more things. For example, a leader struggling to motivate his/her followers, learns there are different preferred methods or rewards to use in motivating people and that each individual has a preference for what motivates them. The leader never knew these existed before and now armed with this knowledge, can begin to act upon this new understanding to help the followers accomplish the tasks through motivation methods that fit the individual followers' preference. From what was Subject to the leader (the unknown) became Object to the leader with information and the ability to reflect upon the new information and change the way he/she *knows* about motivation (other).

Each Order in constructive-development has a different Subject – Object focus. In transition from one Order to another, what once was Subject in the previous Order, becomes Object in the next Order. Figure 2 is an illustration of this transition.

Figure 2.2

Summary of Constructive-Development Subject-Object Transition

Order	Subject	Object
First: Single point, Immediate	Fantasy, impulse, Perception	Movement and sensation
Second: Durable categories	Self-concepts, Needs, Preferences	Fantasy, impulse, Perception
Third: Cross-categorical Thinking	Abstractions, Mutuality, Subjectivity	Self-concepts, Needs, Preferences
Fourth: Cross-categorical Constructing	Ideology, Multiple roles, Self-authorship	Abstractions, Mutuality, Subjectivity
Fifth: Trans-system	Oppositeness, Interpenetration of self and others	Ideology, Multiple roles, Self-authorship

From "Understanding and Applying Cognitive Development Theory," by P.G. Love and P. L. Gutherie, 1999, *New Directions for Student Services*, 88, p. 68.

Five Orders

Kegan identified five Orders of constructive-developmental theory concerned with both how one constructs reality and the development of that construction which becomes more complex across the life span. The Orders range from the infant to the person well into the second half of life. Each Order is a qualitative transition in meaning-making and complexity from the Order before it. As a person transforms, the actual form of how they understand the world expands with the growth across the life span. While there are five Orders, for the purposes of this study, the Second through Fifth Orders will be utilized for the range of the adult population studied.

The First Order resides in young children from birth to seven or eight years of age. During this time span in life, children do not have the capacity for abstract thought. Durable objects are not understood except in the moment the child interacts with them. The world is not concert (working together) and at this Order, children are unable to hold ideas in their head very long. Impulse control is not possible because children are Subject to their impulses. At this Order, there is the need for constant supervision and reminders of the rules (Kegan, 1982). (For the purpose of this study, only adults 17 years of age and older were involved.)

In the Second Order, the instrumental mind generally applies to adolescents, 7 to 10 years of age, though research has determined some adults in society occupy this Order. In this Order, while the individual knows his/her feelings and beliefs exist over time, he/she is now aware that others have beliefs and feelings that remain constant over time as well. In relationship to authority, individuals in this Order believe that what is a rule today is a rule tomorrow and there is a pre-occupation with trying to figure out how

to get past the rule, if it impedes his/her way. Empathy is not possible in this Order, though individuals know others have feelings and desires. At this Order, individuals are self-centered and see others as helpers or barriers to having their needs met. A member of an organization will follow the rules and at minimal risk will break them if he/she does not fit his/her need. Task assignments best for an individual in Second Order are those in his/her own best interest with clear boundaries, limited capacity, and good supervision (Kegan, 1982).

Second Order – Instrumental

Adolescents (7-10 years of age)

Some adults

- Discovers feelings and beliefs exist over time and aware that others have beliefs and feelings.
- A rule today is a rule tomorrow and pre-occupation with trying to figure out how to get past the rule if it impedes their way.
- Empathy not possible, though they know others have feelings and desires.
- Self-centered and see others as helpers or barriers to have own needs met.

Example: A member of an organization will follow the rules and at minimal risk will break them if he/she does not fit his/her need. Task assignments best for this group member are those in his/her own best interest with clear boundaries, limited capacity and good supervision.

The Third Order termed the Socialized or Traditional Mind found in older adolescents and a majority of adults. In this Order lies the ability to subordinate individual desires to the desires of others. The impulses and desires that were Subject in the Second Order (simply part of the self, *have* you), have become Object. Kegan describes Subject as

“...those elements of our knowing and organizing that we are identified with, tied to, fused with or embedded in” (p. 32) while in Third Order these elements become Object (you *have* things, “element of our knowing or organizing we reflect on, handle, look at, be responsible for, relate to each other, take control of, internalize, assimilate, or otherwise operate on” (Kegan, 1994, p. 32).

Adults internalize the feelings and emotions of others, and are devoted to something that is greater than their own needs. This Order’s limitation is the conflict between important others and one’s own devotion. There is no defined sense of what the individual wants outside of others’ expectations or societal roles. In this Order, the adult is model citizen and follows the guidelines and laws out of loyalty to others in the organization. They try hard not to break the rules because they would not want to feel they had let others down. In organizations, Third Order individuals will likely hold leadership positions that do not require independent leadership. According to Kegan’s study, adults spend the majority of their lives in the Third and Fourth Order transition.

Third Order – Socialized

Older adolescents and majority of adults

Developed the ability to subordinate their needs to include the needs of others.

Their needs – Subject to them in Second Order, now Object.

- Ability to internalize feelings and emotions of others.
- Guided by institutions that are important to them (school, religion, political party).
- Able to think abstractly, self-reflective on own and others actions, and devoted to something greater than own needs.
- When there is conflict between important others – feel ‘torn in two’ and cannot make a decision.
- Self-esteem not possible at this Order, as there is no ‘self’ outside of those around them, who define and make up who they are at this Order.

Example: A member of an organization at this Order follows rules out of loyalty to others in the organization and tries not to break them for fear of feeling as though they have let others down. Can take on many leadership roles in the organization as long as there is someone they respect to help them make difficult decisions.

Fourth Order, defined as Self-authoring or the Modern Mind, Kegan (1982) and other researchers indicate occurrence in some adults. In this Order, adults have created a self that exists even outside of its relationships with others. The opinions and desires of others which were previously internalized and which had control over them in Third

Order, are now Object to them, enabling them to examine multiple opinions and mediate among them. Those at the Fourth Order possess their own internal set of rules and regulations – a self-governing system. Unlike the Third Order, Fourth Order adults feel empathy for others, and take the wishes and opinions of others into consideration in decision-making. Adults in Fourth Order make good leaders because of their own internal governing system and are able assist a group in running smoothly according to the leader's inner vision of organizational life. However, they can be so invested in their own way of doing things, that they cannot see connections between their own ideas and the ideas of others. Kegan (1982) described Fourth Order as:

Fourth Order – Self-Authoring

Some adults - Achieved what is obtained in Third Order

- A self defined outside of its relationships to others.
- Previous opinions and desires of others that were Subject to them, are internalized, and do not have control over them and now Object.
- Able to examine and mediate over these rule systems.
- Has own self-governing system to make decisions and mediate conflicts.
- Feel empathy for others and take others needs/desires into consideration when making decisions.
- Does not feel 'torn' by conflict because they have their own system to utilize to make decisions.
- Often referred to as self-motivated, self-directed, and self-monitoring.

Example: Will make good leader because they have a self-governing system.

Organization will run efficiently with their inner vision and policy/procedure system. May have difficulty with others who do not see need to follow the rules and because leader is so invested in own way of doing things, conflict may arise.

The final Order in Kegan's (1982) model of constructive-development is Fifth Order – the Self-Transformational or Postmodern Mind and according to research, very few adults reaching this Order. Adults at Fifth Order have learned the limits of their own inner system and the limits of having an inner system. They are less likely to see the world as dichotomies or polarities. Fifth Order adults are more likely to believe that what people often think of as 'black and white' are just various 'shades of gray' whose differences are made more visible by the lighter and darker colors around them. Adults in Fifth Order generally mediate conflicts between groups, help leaders find common ground, and remind others they exist within the larger community of human beings.

Fifth Order – Self-transformational

Very few adults

- Achieved all involved in Fourth Order, but have learned there are limits to own inner system and limits to having a system.
- Less likely to see the world in dichotomies and polarities and see the various shades of gray.

Example: A member of an organization at this Order acts a mediator of conflicts between various groups. Likely to see the connections and lines that bring

together groups which on the surface do not seem to go together. Helps the leaders across groups seek common ground and promotes the connection of a greater vision than the immediate organization's needs (Kegan, 1982).

Transitions Between Constructive-Development Orders

It is important to understanding that while these five Orders are hallmarks of the development across human life span, there exist vast transitional points between each Order. The span between the orders and the transition points are not equal in the between. The research finds that most adults spend their time in transition between the various transition points of the Orders, holding on to the former Order, while experimenting in the transition to the next Order. There are 21 possible placements within the five Orders of constructive-development with 5 hallmarks and 16 transition points.

First Order:	1, 1(2), 1/2, 2/1, 2(1)	Impulsive Stage
Second Order:	2, 2(3), 2/3, 3/2, 3(2)	Instrumental
Third Order:	3, 3(4), 3/4, 4/3, 4(3)	Interpersonal
Fourth Order:	4, 4(5), 4/5, 5/4, 5(4)	Self-authoring
Fifth Order:	5	Self-Transformational

(Kegan, 1982)

The growth of the individual is in the transition between the points along the continuum between being fully in one Order or another. The transition symbolized by X, X(Y), X/Y, Y/X, Y(X). The growth for the individual finds the current order as 'ruling' his/her day to day understanding and meaning-making. As the individual has

more experiences and increased developmental understanding emerges, the signs of the next Order begin to emerge from outside the individual X(Y). In the next transition along the continuum, the individual begins to experiment and try out aspects of the next Order while firmly holding to the already established Order as dominant X/Y. Here two functioning structures are apparent with the early structure most pre-dominant and clearly a transition in the making for movement toward the next Order. Once the individual develops more understanding and exposure to more complex ways of making meaning, the next order comes more fully into its own and there are two fully functioning structures in use by the individual. It is in this transition point where there is potential for the greatest struggle. While there is not the ability to slip back to the previous Order, as dominant, the struggle of the new complexity can produce growth or surrender to meaning-making that seems both simple and complex.

The final transition point on the continuum from one fully functioning Order to the next Order, Y(X), finds the individual with signs of the old order remaining, but with strong objection to that way of meaning-making in favor of this new pre-dominance of the next fully functioning Order. Figure 3 illustrates the transitions.

Figure 2.3**Description of Transitions Along the Orders**

X(Y)	X ruling - Signs of Y emerging (look externally)
X/Y	X to Y transition Two full structures operating a same time in transitional position X – early structure as predominant
Y/X	Y ruling, signs of X still there Two different epistemological structures (Subject – Object balances) demonstrating themselves. More developed structure tends to pre-dominate. Not slip back as X/Y, steps beyond a little. Transitional: does not overcome/cancel fully operational previous structure (as in Y(X))
Y(X)	Signs of old X remaining – less evident X present being exercised on behalf of NOT being in early Order any longer. Full higher structure maintained Y without slipping back to (X). New Structure Y dominates. Characterized by strong protest against the kind of meaning making evidenced by the X structure. Not protesting “have-to” mentality – but dismisses it as <u>not</u> the point. Mutuality.

(Modified from Kegan, 1982)

Leadership and Constructive-Development

In nearly every discipline, faction of society and around the globe there are scholars, practitioners and researchers studying leadership from every angle seeking to define this phenomena. Kellerman (1984) brought together scholars from across the disciplines to write original essays on how their field considered leadership issues. The chapters provide an overarching view of leadership raising the questions: What is leadership? How does your discipline think about leadership? Is there a moral dimension? Does the discipline offer any particular theoretical or methodological approaches to the question of leadership? The writers' fields range from historians, anthropologists, political scientists, to social psychologists, and organizational behaviorists. Each discipline presented its case for leadership as viewed from his/her discipline's lens. Similarly, recent efforts by the James McGregor Burns Academy involved scholars from several disciplines in a five-year research effort to create a framework of a general theory of leadership (Goethais & Sorenson, ed., 2006).

With a variety of ways leadership is defined, connected morally to our relationship with others, approached through various disciplines and put into question, it is no wonder that it remains such a misunderstood phenomenon. The underlying question that surfaces from the study and practice of leadership exists in the ability of the leader to choose to adapt with the desired skills, techniques and attitude required to lead from the various perspectives. The research on transformational leadership has been continuous since the model was first introduced Burns (1978) and further refined by Bass (1985) and instrumentation development by Avolio and Bass (1995). Further, while Robert

Greenleaf's (1970, 1977) servant leadership theory possesses little empirical research to support it, the writings on the concept of service, spirit and calling as a practice have become widely encouraged in volumes of writings and in the delivery of leader development (Sendjaya & Sarros, 2002). Research in the area of servant leadership is growing evidence as over recent years, evidenced in a search of Dissertation Abstracts and various journal references.

The constructive-development research makes a case for further study in applying the theory to the study of leadership. If the call to leadership points towards the behaviors as defined in transformational and servant leadership, then more study that is empirical is required.

In Benay's, (1997) case study, eight leaders were assessed for transformational leadership behaviors and constructive-development Order. Three of the four highest scoring leaders in transformational behaviors had a Subject-Object assessment of 4(5). Though the sample is small, this finding indicated a relationship between the two measures. Benay (1997) found a relationship on the lower end of the transformational behaviors with the lowest scoring subject holding the lowest Subject-Object assessment of 3/4. Eigel (1998) sampled 21 CEO's for constructive-development Order and leader effectiveness and found a positive relationship between higher levels of Subject-Object (4) assessment with perception of leader effectiveness. Amey's (1991) sampling of five leaders and numerous followers of each leader, found a relationship between leader effectiveness and leader's Subject-Object assessment correlated to the developmental level of the followers. It was concluded that if an organizational culture with followers who preferred a transactional style of leadership were to be lead by a transformational

leadership style, the followers would perceive the leader to be ineffective in his/her leadership of the organization (Amey, 1991).

In an effort to clarify and extend transactional and transformational leadership, Kuhnert & Lewis (1987) applied constructive-development theory to the transformational leadership framework to explain how essential personality distinctions in leaders can lead to these leadership behaviors. This work proposed a three-stage developmental model of leadership Figure 4.

Figure 2.4

Stages of Adult Development Showing the Organizing Process (“Subject”) and the Content of that Organizing Process (“Object”)

Stage	Subject (Organizing Process)	Object (Context of Experience)
2 Imperial (Lower-order Transactional)	Personal goals and agendas	Perceptions Immediate needs, feelings
3 Interpersonal (Higher-order)	Interpersonal connections,	Personal goals and agendas
4 Institutional (Transformational)	Personal Standards and values systems	Interpersonal Connections, mutual obligations

From “Transactional and Transformational Leadership: A Constructive/Development Analysis,” by K. W. Kuhnert & P. Lewis, 1987, *Academy of Management Review*, 12,4, p. 652.

Kuhnert and Lewis (1987) raised several research questions for the future application of constructive-development theory including the study of transactional and transformational leadership. Empirical and longitudinal research is necessary to measure the relationship between constructive-development stages and leadership behaviors. Discovery on how these variables influence how leadership emerges and is expressed by the leader could advance leadership development. Implications were raised in the research include those for leadership training programs and the extent to which development can be truly measured if the transition between Subject (the organizing process of experience) to Object (the content experience) processes can not be rushed along until the individual is truly ready for the transition. Kuhnert & Russell (1989) used constructive-development theory with personnel selection. Further the question was raised whether the developmental fit between leader and followers explains the failures and successes of leaders (Kuhnert & Lewis, 1987; Amey, 1991; Kegan, 1994).

Past analysis and research raise support for the need of further study to understand the relationship between transactional, transformational and servant leadership and readiness of the leader to espouse these behaviors through the lens of constructive-development theory.

Hypotheses

Linking Transactional Leadership and Constructive-Development

How individuals construct meaning out of their experiences could extend our knowledge of how leaders understand, experience, and approach the activity of leading. Through a constructive-development perspective, transactional leadership behaviors

focus on how the exchange of work for reward aligns with a Second Order perspective where personal goals and agendas are the organizing process of an individual in this Order (Kuhnert & Lewis, 1987; Benay, 1997; Barbuto, Fritz, & Marx, 2000;).

Leader's use of contingent reward could be highest when leaders are in transition between constructive-development Second to Third Order. Hypotheses developed in this research around these dimensions were:

Hypothesis 1a: Leader's use of management-by-exception passive will be highest when leaders are in transition between constructive-development Second to Third Order.

Hypothesis 1b: Leader's use of management-by-exception active will be highest when leaders are in transition between constructive-development Second to Third Order.

Hypothesis 1c: Leader's use of laissez-faire will be highest when leaders are in transition between constructive-development Second to Third Order.

Hypothesis 1d: Transformational leadership behaviors from a constructive-development approach finds the leader in Third Order.

The research suggests that the dimensions of transactional leadership described in the literature will align between the Second and Third Order transition points of constructive-development theory. Once a leader reaches a fully Third Order point in meaning-making, a qualitative shift in his/her relationships with others will find them more focused on interpersonal connections and mutual obligations based on trust,

commitment, respect, and mutuality (Kegan & Lahey, 1984; Kuhnert & Lewis, 1987; Benay, 1997; Eigel, 1998; Barbuto, 2005).

Linking Transformational Leadership and Constructive-Development

The leader's transition of the use of transformational leadership behaviors will be in close alignment with the ability to hold consideration for other's needs and desires as well as the goals and needs of the institutions with which his/her followers are affiliated. The transformational leader will become fully Fourth Order when he/she makes the transition to being able to fully hold his/her own meaning-making system and reflect upon its ability to inform his/her decision-making and meet the needs of others. The leader will be able to work from his/her own system of principles and values rather than be held by the people and institutions that held them in the Third Order.

Hypothesis surrounding a leader's transformational leadership behaviors and meaning-making were developed as follows:

Hypothesis 2a: Leader's use of idealized influence will be highest when leaders are in transition between constructive-development Third to Fourth Order.

Hypothesis 2b: Leader's use of inspiration motivation will be highest when leaders are in transition between constructive-development Third to Fourth Order: 4/3.

Hypothesis 2c: Leader's use of individual consideration will be highest when leaders are in transition between constructive-development Third to Fourth Order:3/4.

Hypothesis 2d: Leader's use of intellectual stimulation will be highest when leaders are in transition between constructive-development Fourth to Fifth Order: 4/5.

Hypothesis 2e: Leader's use of charisma will be highest when leaders are in transition between constructive-development Third to Fourth Order: 4/3.

Linking Servant Leadership and Constructive-Development

In an approach to servant leadership with the lens of constructive-development, individuals will be found to bring their experience with a sense of deep understanding of the connections and lines between several systems and groups. While on the surface, these may not seem to go together, the individual assists others to seek common ground and promote a greater vision or connection to a larger good, beyond the group's immediate goals. As a mediator of conflicts and promoter of healing, the Fourth to Fifth Order individual becomes a leader serving the welfare of others and building them up to take responsibility for the leading that is necessary (Farling, Stone & Winston, 1999; Sendjaya & Sarros, 2002; Barbuto & Wheeler, 2002, 2006). Hypotheses for the study developed as follows:

Hypothesis 3a. Leader's use of organizational stewardship will be highest when leaders are in transition between constructive-development Third and Fourth Order: 4/3.

Hypothesis 3b. Leader's use of persuasive mapping will be highest when leaders transition between constructive-development Fourth to Fifth Order: 4/5

Hypothesis 3c. Leader's use of altruistic calling will be highest when leaders transition between constructive-development Fourth and Fifth Order: 4/5.

Hypothesis 3d. Leader's use of emotional healing will be highest when leaders transition between constructive-development Fourth and Fifth Order: 4/5.

Hypothesis 3e. Leader's use of wisdom will be highest when leaders transition between constructive-development Fourth and Fifth Order 4/5.

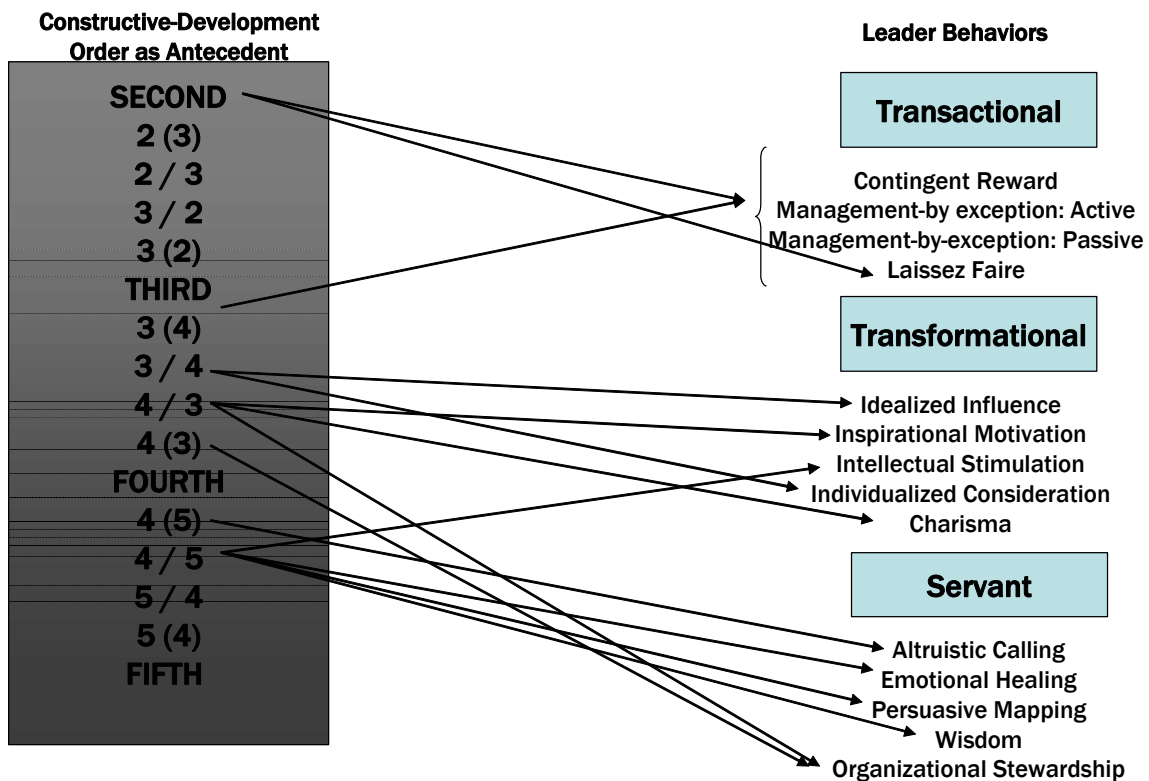
Figure 5 represents the conceptual model of the hypotheses that were tested in this research study.

Figure 2.5

Relationship Among Transactional, Transformational, and Servant Leadership

Dimensions and Constructive-Development Order

Conceptual Model



CHAPTER III

Methodology

This chapter describes the methods used to study the relationship between a leader's constructive-development order and the key aspects of transactional, transformational and servant leadership. Constructive-development Order tested as a predictor of attributes of transactional, transformational and servant leadership for individual level variance. The research design was a multilevel model consisting of community leaders in various leader development programs (Level 1) nested with followers who interact with the leader in organizational relationships either above, as a peer or in subordinate roles (Level 2). The researcher administered the instruments via two web-based survey sites and conducted one-on-one audio taped interviews. The following describes the population, research design, and instrumentation, and closes with a focus on variables in the study.

Population

Participants in this study were leader-follower dyads from several leader development programs, with participants from geographic locations across the United States. Nearly 275 leader participants were invited to participate in the study. The directors of each of the programs were provided with a description of the study to send to their participants either via email or via post. Interested leader participants were directed to the researcher to finalize their participation and provide consent. Of the 275 potential participants, 26% or 71 self-selected to participate in the study. The final number of leaders who completed all parts of the study was 54 with 409 followers. Participants

represent two cohorts of individuals. One set of participants had completed at least a bachelor's degree, in the workforce, and were participants in either a community or post-secondary leadership programs. The second cohort participants were college students who had not completed a bachelor's degree, but had been selected by their institutions to participate in an intensive six-day leader development institute.

The researcher accepted the interest from participants directly. An invitation and informed consent were emailed to schedule the one-on-one audio taped interview. Interview times were offered seven days a week as well as day and evenings. The researcher scheduled interviews with at least thirty minutes in-between for paperwork and processing of thoughts on the interview. A web-based conferencing system was utilized for the interview that provided an 800 number for the researcher and the participant to call and be linked for the telephone interview. The web-based conferencing system recorded the interview, on a prompt from the researcher, and converted the interview to mp3 format was then placed on a secure server with the transcription service.

Once an interview was set, the researcher provided the participant with a link to the Survey Monkey website. The website allowed participants to confirm informed consent, provide demographic data and complete the Servant Leadership Questionnaire. An invitation from the Mind Garden website to complete the Multifactor Leadership Questionnaire, 5x short, was sent to consenting participants.

The leader participants entered the name and email contact of individuals, who could serve as raters. A direct email sent from the Mind Garden system to the raters and the researcher cued the Survey Monkey system to send an email invitation to the leader listed raters. Leaders were able to monitor responses to their invitations on their

individual Mind Garden page, while the researcher provided the monitoring on the Survey Monkey web-based survey system and communicated with the leaders to prompt rater response to the Survey Monkey website. Some confusion on the part of raters on the completion of two (2) assessments on two different web-based systems may have been the cause for inconsistent response rates between the completion of the Multifactor Leadership Questionnaire and Servant Leadership Questionnaire. The researcher made weekly contacts with the leaders, over five weeks, to prompt rater completion.

A “decline” link was provided for those who did not want to continue participation in the study or wished to decline the rating of the leaders in the study and not be contacted again. Eleven leaders eventually dropped from the study and 224 followers declined the survey participation either formally or by not responding to the invitation.

Return rates were defined as the actual number of surveys returned for each web-based survey system. Due to the nature of the instrumentation being defined as 360 degrees and the need to match leaders and raters in the data analysis, leaders with no corresponding followers had to be eliminated from the study. Of the 333 raters receiving the invitation for the Multifactor Leadership Questionnaire and 300 raters receiving the invitation for the Servant Leadership Questionnaire were distributed, overall, 409 were returned resulting in 217/333 (65%) Multifactor Leadership Questionnaire and 192/300 (64%) Servant Leadership Questionnaire usable surveys. Of the 71 surveys distributed to leaders, 56 were returned, resulting in 54 (76%) usable surveys. Of the 70 interviews offered, 60 leaders completed the interview, with 54 (76%) completion of all three parts of the data collection process.

Table 1 shows the distribution and return rate of surveys and interviews from those participating in the study.

Table 3.1

Number of Instruments Distributed, Interviews Conducted and Usable

Instruments	Distributed		Usable		Return Rate	
	Leaders	Raters	Leaders	Raters	Leaders	Raters
Multifactor Leadership Questionnaire	71	333	54	217	76%	65%
Servant Leadership Questionnaire	71	300	54	192	76%	64%
Subject-Object Interview	70		54		77%	

Leaders were 57% female and 43% male with an average of 33 years of age.

Nine percent of the leaders held Bachelors degrees, 42% Masters degrees, and 20% Ph.D.'s. The remaining 18% achieved high school diplomas. Twenty percent of the leaders identified themselves as persons of color while the remaining 80% identified themselves as white, Caucasian (non-Hispanic). Raters that responded to the invitations were 61% male and 39% female with an average of 35 years of age. Seven percent had obtained a high school diploma, 5% an associates degree, 23% bachelor's degrees, 39% Masters degrees and 11% Ph.D's. Eleven percent of the raters identified themselves as persons of color while the remaining 89% identified as white, Caucasian (non-Hispanic). Rater's relationship to the leaders was 56% above the leader, 33% peer to the leader and 12% below the leader. Table 2 provides the leader demographics for this study.

Table 3.2

Leader Demographics (N = 54)

Group	Leaders
Sex	
Male	23
Female	31
Age Level	
18-26	21
27-39	17
40-49	12
50 and over	4
Race Category	
Black and/or African-American	2
Native Hawaiian/Pacific Islander	3
Hispanic/Latino (a)/Chicano (a)	3
White/Caucasian (non-Hispanic)	43
Other (identified mixed race)	3
Education Level	
H.S. Diploma/Associates	16
Bachelor's Degree	5
Masters Degree	22
Ph.D./Ed.D.	11

Research Design

Two instruments to collect quantitative data on the dependent variables, and one assessment was used to qualitative data on the independent variable. For the quantitative measure of the dependent variables transactional and transformational leadership and servant leadership, leaders completed the Multifactor Leadership Questionnaire - 5x short (Avolio & Bass, 2004) and the Servant Leadership Questionnaire (Barbuto & Wheeler, 2006). Raters completed the Multifactor and Servant Leadership Questionnaires rating leader behaviors. A leader interview was used to collect qualitative data on the independent variable. The interview was a slightly modified version of the Subject-Objective Interview based upon the protocol (Lahey, Souvaine, Kegan, Goodman, & Felix, 1988). A brief demographic survey immediately preceded the survey found on the Survey Monkey web-based survey system and leaders identified the relations of the raters, as above, peer, or below in the organization or relationship, on the Mind Garden web-based assessment system.

Measures

Multifactor Leadership Questionnaire

Burns (1978) identified transactional and transformational leadership construct through his study of political leader characteristics. Bass (1985) developed a model identifying these factors now referred to as transactional and transformational leadership factors. The Multifactor Leadership Questionnaire, 5x short, was developed from the initial research using revised versions of the MLQ (Bass & Avolio, 1995, 2004). The questionnaire emerged empirically to differentiate between the constructs through sub-

scales for both transactional and transformational leader behaviors resulting in a 'full range' of leader behaviors as highly transformational on one end to those which are highly 'hands off' at the other end.

A meta-analysis of the literature on the Multifactor Leadership Questionnaire for measuring transactional and transformational leader behaviors was conducted by Lowe and Koeck (1996). The instrument has been utilized in over 100 research studies, appearing in journals, dissertations, book chapters, conference papers, and technical reports. Studies in a variety of organizational settings have used the instrument to study leaders including manufacturing, the military, educational, religious and volunteer institutions. The studies included leaders at various levels in the organization including front-line supervisors, middle managers, senior managers and CEOs.

For this study, the Multifactor Leadership Questionnaire, form 5x short, was used to assess leaders' transactional and transformational leader behaviors. The instrument contains 45 statements and consists of two versions. The leader version contains statements that describe behavior, as perceived by the leader perceives. The leader judges how frequently each statement fits his/her behaviors. The rater version contains similar statements that ask the rater to evaluate the identified leader's behaviors, as he/she perceives them, again judging how frequently the statement fits the leader he/she is rating. Both forms utilize a 5-point Likert-type scale ranging from "0" (Not at all) to "4" (Frequently, if not always).

Four sub-scales reflect transactional leadership and five sub-scales reflect transformational leader behavior. Three sub-scales determine degree of leader effectiveness, extra effort elicited and satisfaction among followers. The transactional

leader sub-scales identify as contingent reward, management-by-exception active, management-by-exception passive, and laissez faire. The transformational leader sub-scales include idealized influence (attributed and behaviors), inspirational motivation, intellectual stimulation, and individualized consideration.

The Multifactor Leadership Questionnaire, considered the ‘gold standard’ for empirical research on full-range leadership behaviors and has established validity and reliability. Bass and Avolio (1990) used 14 samples to validate the reliability of the questionnaire resulting in Cronbach's alphas ranging from .91 to .94. Lowe and Kroeck's, (1996) meta-analytic review of the literature for assessment of transformational and transactional leadership confirmed the ability to measure transformational leadership and leader effectiveness with reliability.

The sub-scales for the Multifactor Leadership Questionnaire and behaviors intended to be measured shown in Figure 3.1.

Figure 3.1

Multifactor Leadership Questionnaire Sub-Scale Sample

<u>Transactional Sub-scale</u>	<u>Sample Statement</u>
Contingent Reward	Provides with help in exchange for my efforts
Management-by-Exception Active	Directs my attention toward failing to meet standards
Management-by-Exception Passive	Waits for things to go wrong before implementing action
Laissez Faire	Avoids involvement when important issues occur
<u>Transformational Behaviors</u>	<u>Sample Statement</u>
Idealized Influence (Behavior)	Talks about their important values and beliefs
Idealized Influence (Attributed)	Instills pride in me for working with him/her
Inspirational Motivation	Instills pride in me for being connected with him/her
Intellectual Stimulation	Gets me to look at problems from multiple angles
Individual Consideration	Spends time teaching and coaching me
<u>Effectiveness & Satisfaction</u>	<u>Sample Statement</u>
Extra Effort	Increases my willingness to try harder
Effectiveness	Effective in meeting my job-related needs
Satisfaction	Uses methods of leading that are satisfaction

Adapted from “Multifactor Leadership Questionnaire: Third Edition Manual and Sampler Set,” by B.

Avolio and B. Bass, 2004, Mind Garden.

Servant Leadership Questionnaire

The Servant Leadership Questionnaire, developed by Barbuto and Wheeler (2006), operationalize a scale for empirical research on servant leadership. The scale development for the Servant Leadership Questionnaire reduced an initial list of attributes from eleven characteristics derived from an analysis of the literature to five key attributes. The attributes to measure servant leadership identified as altruistic calling, emotional healing, wisdom, persuasive mapping and organizational stewardship. The Servant Leadership Questionnaire exists as the only empirically-tested assessment measuring attributes of servant leadership behavior. The scale development and construct clarification by Barbuto and Wheeler (2006) provided an instrument with value for research through strong factor structures and good validity criteria performance.

Two forms for the Servant Leadership Questionnaire were used, one for leader self-report and one rater form for one to five individuals rating leader behavior. Figure 3.2 provides sample statements from the rater form of each sub-scale for followers rating leaders:

Figure 3.2

Servant Leadership Questionnaire Sub-Scale Sample Statements

<u>Behaviors</u>	<u>Sample statement</u>
Altruistic Calling	This person puts my best interests ahead of his/her own
Emotional Healing	This person is one that could help me mend my hard feelings
Wisdom	This person seems in touch with what's happening
Persuasive Mapping	This person offers compelling reasons to get me to do things
Organizational Stewardship	This person is preparing the organization to make a positive difference in the future.

Adapted from "Scale Development and Construct Clarification of Servant Leadership" by J. Barbuto, Jr. and D. Wheeler, 2006, *Group and Organization Management*, 31, 3.

Servant Leadership Questionnaire leader and rater samples found in Appendix C & D.

Subject-Object Interview

The Subject-Objective Interview was designed as a tool for understanding what the Subject's experience means to him/her in order to classify the person in terms of constructive-development theory (Lahey, et al. 1988). The fundamental question of the Subject-Object analysis was designed to answer the question, from where in the evolution of Subject-Object relations does the person seem to be constructing his or her reality? (Lahey, et al. 1988). In analysis, the researcher attempts to understand the particular

Subject-Object level in which the participant is engaged.

Researcher Training on Subject-Object Interview

The researcher received training through the research team at Harvard Graduate School of Education in the Subject-Object interview and interpretation scoring method in the October 2005. Follow-up training found the researcher to be reliable in overall scoring within the acceptable 1/5 order discrimination. Further, review of the researcher's interviewing, on several pre-study interviews, resulted in the researcher being deemed capable in the interview method to yield the 'scorable' bits of structure required.

Participants were provided with a page of instructions for reflection prior to the interview, each containing a word or phrase. This protocol was an enhanced version from the original published in the guide (Lahey, et al. 1988), as evolution from researchers currently utilizing the method. Current researchers have found several of the initially developed word or phrase protocols often did not yield enough structure for scoring.

For this study, the trained researcher used the following five (5) words or phrases with the participants: change; success; torn; angry; and important to me/strong stand/conviction. These words or phrases served to purposefully direct the discussion from the very beginning of the interview toward 'ripe' content areas (as discovered in the initial research conducted by Kegan, 1982). The notes of the participant, under each word or phrase, 'fill up' the interview with material for exploration during the interview and were unlikely to be exhausted during the sixty minutes.

Since all but one interview were conducted over the telephone, each participant was provided with a written interview protocol generally 24 hours prior to the interview (Appendix E). The protocol introduced the participant to the conduct of the interview and prompted the participant to take the opportunity to write notes about each of the words or phrases. In example, the protocol prompted the participant with a statement related to ANGRY:

“If you were to think back over the last several weeks, even a couple of months, and you think about times you felt really angry about something, or times you got really mad or felt a sense of outrage or violation; are there two or three things that come to mind? Take a minute to think about it, if you like, and jot down on the card whatever you need to remind you of what they were.” (If nothing comes to mind for the interviewee for this particular word, move to the next card). (Lahey, et al.1988).

The participants were able to jot down notes in preparation for the interview with thoughts that came to mind for each of the topics. The protocol prompted the participant to complete this task 20-30 minutes prior to the actual interview, though it was known that several completed his/her preparation hours or even the day prior to the interview. These notes were kept by the participant and he/she decided whether or not to talk about any particular writing during the interview.

During the interview, the researcher engaged in combined empathic listening and probing for deeper meaning and understanding of the way the participant had or had not

constructed meaning from his/her experiences. For example, if the participant chose to talk about 'angry,' the researcher's job was to ask the right questions to find out *not what* the participant is angry about, but the *how's and why's* behind the participant's experience of being angry. This information informed the researcher on how the interviewee constructed meaning. The additional task of the researcher during the interview was to form and test hypotheses in order to find the Order achieved by the participant and 'push' for the highest Order of meaning-making constructed by the participant. There were 21 possible distinctions within the five Orders. For the purpose of this research, Second through Fifth Orders were considered for the post-adolescent population of 17 years of age and above. This provided the researcher with range of the meaning-making system over 17 transition places. 'Pushing' toward the higher Order revealed the participant's ability for higher complex thinking in the constructing of meaning from his/her experiences. Testing the achievement Order, allowed the researcher to better narrow the field to the actual Order.

Variables in the Study

The dependent, or criterion, variables in this study were leader behaviors defined by transactional and transformational leadership as measured by the Multifactor Leadership Questionnaire, form 5x short (Avolio & Bass, 2004) and servant leadership behaviors as measured by the Servant Leadership Questionnaire (Barbuto & Wheeler, 2006). The independent, or predictor variable in the study was leader constructive-development Order of meaning-making as measured by the Subject-Object Interview (Kegan, 1982; Lahey, et al. 1988).

Data Analysis

Invitations were distributed via an e-mail to participants from the two web-based survey systems (Appendix H). The e-mail contained a link to the SurveyMonkey web-based system that included the confirmation of consent to participate, the demographic form and Servant Leadership Questionnaire. The Mind Garden web-based system included the Multifactor Leadership Questionnaire. Separate invitations from each web-based system were sent to leaders and followers to link them to the respective surveys. Survey information was submitted by the participants to the two vendors, SurveyMonkey.com and Mind Garden.com. Both vendors provided the researcher direct password coded access to the results. The Mind Garden system retains data from the leader and raters answers, without identification, for aggregated on-going research on the Multifactor Leadership Questionnaire. The survey housed on the SurveyMonkey system was not utilized by anyone except the researcher. Both vendors ensured network security, hardware security and software security.

The choice of web-based surveys was based on the impression that collecting the data from participants across the United States would provide the most efficient and effective manner for inclusion of a broad geographic sample. The option for both surveys could have included mailing the surveys and doing follow up mailings. This would have increased the need for data entry and increased the likelihood of errors, which was eliminated, for the most part, when utilizing web-based systems. While other web-based survey systems were considered, the SurveyMonkey system came highly recommended from other researchers. The SurveyMonkey system was chosen for its

ease of use and data handling capacity.

In the Mind Garden system, the researcher entered names and email addresses of participants. A general email invitation was generated to all leader participants from the system. The researcher set up an e-mail account that was used for the sole purpose of monitoring the participants in the study. The correspondence from the initial e-mail invitation, directed participants to watch for the two e-mail messages for the survey systems. It was known that some participants worked at organizations with strong filter systems on their internet connections and would automatically screen out e-mails with the word monkey or a phrase like mind garden. This proved to be a problem for some raters as well, who found the invitations in their junk mail, if they checked at all.

The Mind Garden system allowed the researcher to assist in providing follow-up requests to the raters for their participation. A tracking system of the number of responses completed and outstanding was a welcomed feature of this system. Once the data collection was completed, a request was made to send the raw data via e-mail to the researcher for transfer to statistical analysis software.

In the SurveyMonkey system, the researcher developed two surveys, one for leaders and one for raters. The system offers a variety of question templates that allowed for open-ended, multiple choice, short answers and locked in answer questions. The system was easy to use and allowed for copying of surveys to modify for differing population organizations that participated in the study. Data was monitored and tracked with ease as participants completed the surveys. Even though names were entered into the systems, the links often provided a way for the participants not to be recorded and linked to their name or email. The researcher provided all participants, leaders and raters

with a unique ID code to enter into the survey to keep track of respondents and to match the leaders with their raters. This type of double assurance was necessary in utilizing a web-based system.

Data were downloaded from the SurveyMonkey site, available in several formats, with easy opportunity to maintain back up of the data. Drawbacks of the system included excluding participants from receiving repeat e-mails from a group list as well.

Data from both survey systems for the MLQ and SLQ was compiled into one Excel spreadsheet. Careful matching of leaders and raters was achieved. Two files were kept, with one including names and the other with names removed before data analysis was performed. SLQ and MLQ scores were summed using a SPSS syntax code. Both a wide data set and a stacked data set were developed to prepare for two levels of analysis.

Data results of the quantitative measures from all surveys was formatted per instructions in SPSS, placing Level 1 and Level 2 variables within a single field such that the value of the Level 2 variables are identical for all cases 'nested' within a particular Level 1 unit (e.g. all leaders and their respective raters). The data were exported as a .dat file and analyzed using Mplus. Mplus software, a comprehensive package for both single and multi-level modeling program, for the unique use of both continuous and categorical latent variables. Continuous latent variables are used to represent factors corresponding to unobserved constructs, random effects corresponding to individual differences in development, random effects corresponding to variation in coefficients across groups in hierarchical data, and latent response variable values corresponding to missing data (Muthén & Muthén, 1998-2001).

For the qualitative data collection utilizing the Subject-Object interview, upon

completion of the audio-taped interviews, recordings were transcribed and interpreted by the researcher for scorable “bits” of meaning-making structure (Appendix F & G). Each interview must have at least three solid ‘bits’ scored at the same point to produce a score. Each interview was given two scores. The actual transition Order from the formulation sheet and a score the researcher called the SOI (Subject-Object Interview) converted score for use in the statistical analysis. (It should be noted here that though the assigned score implies an equal distance between each of the Orders in the transition, there is no indication that the transition from one transition point to the next in an Order is an equal transition of time or effort.) The scores appear in Table 3.3.

Table 3.3 *Subject-Object Interview (SOI) Score Conversion for Statistical Analysis*

SOI Order Score	SOI Converted Score
2	2.0
2(3)	2.2
2 / 3	2.4
3 / 2	2.6
3(2)	2.8
3	3.0
3(4)	3.2
3 / 4	3.4
4 / 3	3.6
4(3)	3.8
4	4.0
4(5)	4.2
4 / 5	4.4
5 / 4	4.6
5(4)	4.8
5	5.0

For inter-rater reliability purposes, two secondary raters were utilized to score random interviews at a ratio of 1 to 3. The two secondary raters were provided with the every third transcription in the order of date of interview for a true 1 in 3 ratio. The researcher's initial rating and a second rater rating must score within one transition position, 1/5, for reliability. If the researcher and second rater did not agree, a review of the transcript and comparisons were made to determine the final score. Dissertations and projects which used this technique reported complete agreement reliabilities of 70 to 80% range, and most reliabilities at 100% for a 1/5 Order discrimination (Lahey, et al. 1988).

Summary

This chapter outlined the research methods utilized to conduct the study. Multiple methods of data collection were used to satisfy the quantitative and qualitative variables in the study. Web-based surveys were distributed to leaders and their respective raters and interviews of leaders were conducted via telephone calls with audio taping using a conference-based telephone system. Data were recorded in the web-based systems and interviews were recorded in mp3 format. Both quantitative data were downloaded, interview recordings were transcribed and interpreted, and analyzed to test hypotheses.

CHAPTER IV

Results

The leaders' constructive-development Orders were tested as predictors of leaders' and raters' perceptions of transactional, transformational, and servant leader behaviors. The Multifactor Leadership Questionnaire, Form 5x (leader and rater versions), were used to measure leaders' level of transactional and transformational leader behaviors and the Servant Leadership Questionnaire (leader and rater versions) was used to measure leaders' level of servant leader behaviors. The Subject-Object Interview assessed the leaders' constructive-development Order. The data collected were from two levels (leader level – leaders' perception of their transactional, transformational and servant leader behaviors with measure of leader constructive-development Order), and group (raters level – raters perception of leaders transactional, transformational and servant leader behaviors). A multi-level model was utilized in data analysis with hierarchical linear modeling used to test study hypotheses.

Simple Statistics and Correlations

Simple statistics and correlations were calculated for all variables of the study for all participants (leaders $N = 54$; raters $N = 409$).

Scale reliabilities were acceptable for nearly all subscales per Nunnally's (1978) conclusion that minimum reliability (Cronbach's alpha) measures should be at .70. In this study, the Multifactor Leadership Questionnaire, Form 5x short, had an overall reliability of .68. Several subscales performed under the standard including contingent reward ($\alpha = .57$); management-by-exception passive ($\alpha = .62$); laissez faire ($\alpha = .53$);

idealized influence ($\alpha = .59$); inspirational motivation ($\alpha = .69$); extra effort ($\alpha = .67$); and effectiveness ($\alpha = .69$). Scale reliabilities for the Servant Leadership Questionnaire met the standard of .70 with $\alpha = .88$.

The Subject-Object scale was assessed for inter-rater reliability overall at .83. The accepted test-retest reliability ranged from .75 to .90. The research utilizing this method supports a test of 20 percent of the interviews by a second rater. Either complete agreement or agreement within 1/5 stage is considered acceptable reliability. The general preference for inter-rater reliability through much of the research support the range method and is supported by a measure with the longest “track record”, namely the Moral Judgment Interview (Colby & Kohlberg, 1987). The Moral Judgment Interview at the finest differentiation supports thirteen distinctions between stages one and five; it distinguishes two transition points between any two stages. The Subject-Object Interview makes an even finer distinction between any two Orders (stages) with 21 distinctions between Orders (stages) one to five and distinguishes four transitional points between any two Orders (stages). The researcher achieved ten interview scores within the acceptable 1/5 distinction, five scores with 100% agreement and three scores not in agreement of the 18 interviews scored by two raters. One rater scored 13 and has 20 years of experience with the measure and a rater with one year of active experience scored five interviews.

Simple Statistics Servant Leadership Questions

The following table (Table 4.1) represents the simple statistics from the Servant Leadership Questionnaire for both leaders' self-report and raters' assessment of leaders in this study.

Table 4.1

Simple Statistics Servant Leadership Questionnaire Leader Self-Report (N= 54) and Raters (n = 192)

Attribute	Leader M	Leader SD	Rater M	Rater SD
Altruistic Calling	3.67	.57	3.60	1.01
Emotional Healing	3.59	.63	3.13	1.29
Wisdom	3.83	.72	4.08	.82
Persuasive Mapping	4.53	.66	3.53	.99
Organizational Stewardship	4.26	.83	4.12	1.19

Note: Scale Range: 0 (Never) to 4 (Always)

Simple Statistics Multifactor Leadership Questionnaire

The following is a statistical comparison (Table 5) of the transformational and transactional attributes scores of the Multifactor Leadership Questionnaire for this study and the normative sample (Avolio & Bass, 2004).

Table 4.2

*Leader and Rater Simple Statistics and Multifactor Leadership Questionnaire**Comparison*

Attributes	Leader Report n = 54	Leader	Rater Report n=217	Rater	Normative Study* Self n =3375	Normative Study* Self	Normative Study* Others n =13829	Normative Study* Others
	M	SD	M	SD	M	SD	M	SD
Ila	3.09	.49	3.32	.65	2.95	.53	2.93	.76
Ilb	3.19	.59	3.20	.63	2.99	.59	2.75	.72
IM	3.30	.48	3.37	.62	3.04	.59	2.86	.76
IS	2.97	.63	3.07	.67	2.96	.52	2.74	.71
IC	3.27	.56	3.20	.70	3.16	.52	2.81	.76
CR	2.92	.06	3.18	.61	2.99	.53	2.86	.68
MBEA	1.45	.77	1.58	.95	1.58	.79	1.69	.89
MBEP	.90	.67	.85	.71	1.07	.79	1.03	.75
LF	.59	.48	.43	.08	.61	.62	.65	.67
EE	3.11	.49	3.32	.68	2.79	.61	2.71	.86
E	3.27	.44	3.36	.63	3.14	.51	3.05	.74
S	3.30	.53	3.44	.67	3.09	.55	3.08	.82

Note. *Normative Study data (Avolio & Bass, 2004).

Ila = Idealized Influence Attributed; Ilb = Idealized Influence Behavior; IM = Inspirational Motivation; IS = Intellectual Stimulation; IC = Individual Consideration; CR = Contingent Reward; MBEA = Management-by-exception Active; MBEP = Management-by-exception Passive; LF =Laissez Faire; EE = Extra Effort; E = Effectiveness; S = Satisfaction. Scale: 0 (Not at all) to 4 (Frequently, if not always)

Simple Statistics Constructive-Development Order

Participant constructive-development order scores as compared to samples from general populations. Comparisons were sourced from the most recent available data on studies of constructive-development Order utilizing the Subject-Object Interview as developed by Lisa Lahey and associates (Lahey, et al. 1988) (Table 4.3).

Table 4.3

Constructive-Development Order Distribution and Comparison Studies

Orders Scores	Leaders This study (N = 54)		Leaders This study with middle removed (n = 44)		Bar-Yam (highly educated sample)* (n = 60)		Professional Educated Composite* (n = 207)		Original Dissertation Composite* (N = 282)	
5	0	0%	0	0%	0	0%	0	0%	0	0%
4-5	4	7%	4	9%	6	10%	15	7%	17	6%
4	7	13%	7	16%	25	42%	83	40%	9	34%
3-4	20	37%	10	23%	22	37%	68	33%	91	32%
3	9	17%	9	20%	7	11%	31	15%	40	14%
2-3	13	24%	13	30%	0	0%	5	2.5%	22	8%
2	1	2%	1	2%	0	0%	5	2.5%	15	5%

Note: *Source: Robert Kegan, 1994. *In over our heads: The mental demands of everyday life*. Cambridge, Massachusetts: Harvard University Press, p. 192-195, Tables 5.3 and 5.5.

This study sample yielded similar results to the comparison studies (see Table 4.3). The comparison studies selected show the similarities of the results of this study

with previous studies and the overall composite available to date. This study featured a treatment of the study sample using $N = 54$ original analysis and $n = 44$ in post hoc analysis. In comparisons of the studies, the Bar-Yam (1991) was selected with demographics included $N = 60$ (similar to this study $N = 54$); highly educated sample, 40 women, 20 men with 25-55 years of age who were pursuing graduate degrees. The professional, highly educated sample included $N = 207$ with 25-55 years of age range, most similar to this study in age range. The overall composite study ($N = 282$) presents twelve studies, including widespread education levels (similar to this study), and 19-55 years of age (similar to this study).

The scores for constructive-development Order from this study compare favorably with the distribution between Orders for comparison studies (Table 6). Orders 5, 4-5, 3-4, and 3 have comparable percentage ranges with these studies and the overall composite. Fourth Order had a smaller sample which could be explained by the $M = 36$ years of age for this study's participants. This study presents an age range younger in the 18-25 years of age category than other studies. Second to Third Order scores were larger in sample explained in part by the larger portion (39%) of 18-25 years of age participants in this study.

Correlating Independent and Dependent Variables

There were positive relationships found between constructive-development order and several dependent variables. There was a significant, positive relationship between leader constructive-development order and leader self-reported individualized consideration ($r = .33$; $p < .05$). A significant, positive relationship was found between

leader constructive-development order and raters' report of leaders' wisdom ($r = .30$; $p < .05$) and persuasive mapping ($r = .22$; $p < .05$). These relationships were small, but achieved the recommended power level ($p < .05$, $N = 54$) (Cohen & Cohen, 1983). These relationships were statistically significant. Variable means, standard deviation and correlations appear in Tables 7-13.

Correlations on transformational leadership subscales and constructive-development order for leaders' self-report yielded one significant, positive relationship. Transformational subscales included idealized influence attributed, idealized influence behaviors, inspirational motivation, intellectual stimulation, and individual consideration. (Table 4.4).

Table 4.4

*Simple Statistics and Correlation Matrix for Multifactor Leadership Questionnaire
Transformational Subscales and Constructive-Development Order Leader Self-Report
(N= 54)*

Variable	M	SD	CD	Ila	Ilb	IM	IS	IC
CD	3.26	.63	.84					
Ila	3.09	.49	-.05	.60				
Ilb	3.19	.59	.09	.47**	.74			
IM	3.30	.48	-.07	.42**	.49**	.72		
IS	2.97	.63	.08	.41**	.64**	.37**	.77	
IC	3.27	.56	.33*	.41**	.58**	.50**	.51**	.69

Note. CD = Constructive-Development Order; Ila = Idealized Influence Attributed; Ilb = Idealized Influence Behavior; IM = Inspirational Motivation; IS = Intellectual Stimulation; IC = Individual Consideration. Scale reliabilities on the diagonal. Scale: 0 (Not at all) to 4 (Frequently, if not always).
* $p < .05$. ** $p < .01$

There was a positive relationship between leader constructive-development order and leader self-reported individualized consideration ($r = .33$; $p < .05$). Correlations on transformational leadership subscales and constructive-development order for raters' report on leaders were not significant (Table 4.5).

Table 4.5

*Simple Statistics and Correlation Matrix for Multifactor Leadership Questionnaire
Transformational Subscales and Constructive-Development Order Rater Report (N = 54)*

Variable	M	SD	CD	Ila	Ilb	IM	IS	IC
CD	3.26	.63	.84					
Ila	3.32	.65	-.18	.74				
Ilb	3.20	.63	.11	.51**	.65			
IM	3.37	.62	-.06	.65**	.60**	.82		
IS	3.07	.67	.03	.58**	.65**	.54**	.76	
IC	3.20	.70	.03	.55**	.56**	.47**	.82**	.69

Note. CD = Constructive-Development Order; Ila = Idealized Influence Attributed; Ilb = Idealized Influence Behavior; IM = Inspirational Motivation; IS = Intellectual Stimulation; IC = Individual Consideration. Scale reliabilities on the diagonal. Scale: 0 (Not at all) to 4 (Frequently, if not always).
* $p < .05$ ** $p < .01$

There were no significant relationships between leader constructive-development order and raters' assessment of leaders' transformational leadership behaviors.

The following hypotheses were not supported as predictors of transformational leadership behaviors by the aggregated scores of leaders and raters.

Hypothesis 2a: Leader's use of idealized influence will be highest when leaders are in transition between constructive-development Third to Fourth Order.

Hypothesis 2b: Leader's use of inspiration motivation will be highest when leaders are in transition between constructive-development Third to Fourth Order: 4/3.

Hypothesis 2c: Leader's use of individual consideration will be highest when leaders are in transition between constructive-development Third to Fourth Order: 3/4.

Hypothesis 2d: Leader's use of intellectual stimulation will be highest when leaders are in transition between constructive-development Fourth to Fifth Order: 4/5.

Hypothesis 2e: Leader's use of charisma will be highest when leaders are in transition between constructive-development Third to Fourth Order: 4/3.

Simple statistics and correlations on transactional leadership subscales and constructive-development order for leaders' self-report on leaders were not significant (Table 4.6). Transactional leadership behaviors included contingent reward, management-by-exception active, management-by-exception passive, and laissez faire.

Table 4.6

Simple Statistics and Correlation Matrix for Multifactor Leadership Questionnaire Transactional Subscales and Constructive-Development Order Leader Self-Report (N = 54)

Variable	M	SD	CD	CR	MBEA	MBEP	LF
CD	3.26	.63	.84				
CR	2.92	.60	-.10	.57			
MBEA	1.45	.77	-.22	.05	.71		
MBEP	.90	.67	.08	-.19	.12	.62	
LF	.59	.48	.01	-.12	.22	.44**	.33

Note. CD = Constructive-Development Order; CR = Contingent Reward; MBEA = Management-by-Exception Active; MBEP = Management-by-Exception Passive; LF = Laissez Faire. Scale reliabilities on the diagonal. Scale: 0 (Not at all) to 4 (Frequently, if not always).

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

There were no significant relationships between leaders' constructive-development order and leaders' self-report on transactional leadership behaviors.

Transactional leadership subscales and constructive-development order correlations for raters' assessment of leaders' behavior were not significant (Table 10).

Table 10

*Simple Statistics and Correlation Matrix for Multifactor Leadership Questionnaire
Transactional Subscales and Constructive-Development Order Rater Report (N = 54)*

Variable	M	SD	CD	CR	MBEA	MBEP	LF
CD	3.26	.63	.84				
CR	3.18	.61	.02	.66			
MBEA	1.58	.95	-.07	-.05	.73		
MBEP	.85	.71	.08	-.28**	-.16	.61	
LF	.43	.56	.08	-.47**	.03	.63**	.58

Note. CD = Constructive-Development Order; CR = Contingent Reward; MBEA = Management-by-Exception Active; MBEP = Management-by-Exception Passive; LF = Laissez Faire. Scale reliabilities on the diagonal. Scale: 0 (Not at all) to 4 (Frequently, if not always).

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

There were no significant relationships found between leaders' constructive-development Order and raters' assessment of leaders self-report on transactional leadership behaviors.

The following hypotheses were not supported as predictors of transactional leadership behaviors as measured by the aggregate of leader and rater scores:

Hypothesis 1a: Leader's use of contingent reward will be highest when leaders are in transition between constructive-development Second to Third Order.

Hypothesis 1b: Leader's use of passive management-by-exception will

be highest when leaders are in transition between constructive-development Second to Third Order.

Hypothesis 1c: Leader's use of active management-by-exception will be highest when leaders are in transition between constructive-development Second to Third Order.

Hypothesis 1d: Leader's use of laissez-faire will be highest when leaders are in Transition between constructive-development Second to Third Order.

Simple statistics and correlations on Multifactor Leadership Questionnaire outcomes subscales and constructive-development order for leaders' self-report were not significant (Table 11). Outcomes defined as extra effort, effectiveness and satisfaction.

Table 11

*Simple Statistics and Correlation Matrix for Multifactor Leadership Questionnaire
Outcomes Subscales and Constructive-Development Order Leader Self-Report (N = 54)*

Variable	M	SD	CD	EE	E	S
CD	3.26	.63	.84			
EE	3.11	.49	.10	.65		
E	3.27	.44	.19	.49**	.59	
S	3.30	.53	-.01	.44**	.71**	.68

Note. CD = Constructive-Development Order; EE = Extra Effort; E = Effectiveness; S = Satisfaction.
Scale reliabilities on the diagonal. Scale: 0 (Not at all) to 4 (Frequently, if not always)

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

There were no significant relationships found between leaders' constructive-development order and leaders' self-report on outcomes of leadership behaviors.

Correlations on outcomes subscales and constructive-development order for raters' assessment of leaders were non-significant (Table 12).

Table 12

Simple Statistics and Correlation Matrix for Multifactor Leadership Questionnaire Outcomes Subscales and Constructive-Development Order Rater Report (N = 54)

Variable	M	SD	CD	EE	E	S
CD	3.26	.63	.84			
EE	3.32	.68	-.03	.80	.	
E	3.36	.63	-.18	.71**	.79	.
S	3.44	.67	-.21	.71**	.69**	.78

Note. CD = Constructive-Development Order; EE = Extra Effort; E = Effectiveness; S = Satisfaction. Scale reliabilities on the diagonal. Scale: 0 (Not at all) to 4 (Frequently, if not always)

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

There were no significant relationships found between leaders' constructive-development order and raters' report on outcomes of leader behaviors.

Correlations on Servant Leadership subscales and constructive-development order for leaders' self-report were not significant. Subscales included altruistic calling, emotional healing, wisdom, persuasive mapping and organizational stewardship (Table 13).

Table 13

Simple Statistics and Correlation Matrix for Servant Leadership Questionnaire Subscales and Constructive-Development Order Leader Self Report (N = 54)

Variable	M	SD	CD	AC	EH	W	PM	OS
CD	3.26	.63	.84					
AC	3.67	.57	.16	.87				
EH	3.59	.63	.05	.11	.78			
W	3.83	.72	-.10	.30*	.32*	.86		
PM	4.53	.66	.13	.45**	.27	.41**	.76	
OS	4.26	.83	.14	.57**	.24	.28**	.47**	.87

Note. CD = Constructive-Development Order; AC = Altruistic Calling; EH = Emotional Healing; W = Wisdom; PM = Persuasive Mapping; OS = Organizational Stewardship. Scale reliabilities on the diagonal. Note: Scale Range: 0 (Never) to 4 (Always)

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

There were no significant relationships found between leaders' constructive-development Order and leaders' self-report on servant leadership behaviors.

The following hypotheses were not supported as predictors of servant leadership behaviors as measured by the aggregate of leader and rater scores:

Hypothesis 3a: Leader's use of organizational stewardship will be highest when leaders are in transition between constructive-development Third and Fourth Order: 4/3.

Hypothesis 3b: Leader's use of persuasive mapping will be highest when leaders are in transition between constructive-development Fourth and Fifth Order: 4/5.

Hypothesis 3c: Leader's use of altruistic calling will be highest when leaders are in transition between constructive-development Fourth and Fifth Order: 4/5.

Hypothesis 3d: Leader's use of emotional healing will be highest when leaders are in transition between constructive-development Fourth and Fifth Order: 4/5.

Hypothesis 3e: Leader's use of wisdom will be highest when leaders are in transition between constructive-development Fourth and Fifth Order 4/5.

Results Using a Multilevel Model

Data in this study was collected from individual followers' ratings of leaders as well as leaders' self-reports. The researcher interviewed the leaders' only for the qualitative measure. The leaders were responsible to designate the raters they desired to rate their leader behaviors on the two quantitative instruments and because of this

selection, we may assume some similarities in how they rated the leader and thus we may not be able to satisfy the “independence of observations” assumption that underlies traditional statistical approaches (Raudenbush & Bryk, 2002). In the selection of raters by the leaders, it can be assumed that the raters and leaders exist in a similar hierarchy and tend to be more similar to each other than individuals randomly sampled from the entire population. Thus, with this study, leaders and raters come from a similar community (workplace, organizations, and other settings). Leaders were asked to identify the rater’s relationship to the leader in terms of a hierarchical structure such as above, peer and below the leader in the organization. In addition to this designation, the leaders’ shared common educational preparation--the sample was either currently enrolled in higher education or had previously attained post-secondary degrees. These types of relationships tend to increase homogeneity over time (Osborne, 2000). Data of this type is defined as “nested” where lower level data (collected from raters) can be aggregated into high-level groups or clusters (all raters of a leader) (Raudenbush & Bryk, 2002).

Hierarchical Linear Modeling

Hierarchical linear modeling (HLM) is a statistical technique that analyzes data on multiple levels. Data repeatedly gathered on an individual is hierarchical as all observations are nested *within* the individuals. In a study of this size, individuals are nested *within* the experiment and the relationships *between* the individual leaders and their raters or across hierarchical levels (Hofmann, 1997). HLM allows for both individual

and group level variance in individual outcomes and still use individual and group (raters in this study) as predictors on the individual level.

A multilevel analysis performed via hierarchical linear modeling finds Level 1 model estimated separately for each group. The model expressed as:

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

where Y_{ij} is the outcome measure for individual i in group j , X is the values on the predictor variable (difference in assessment subscales ratings) for individual i in group j , $\beta_{0j} + \beta_{1j}$ are the intercepts and slopes estimated separately for each group (noted by j subscript), and r_{ij} is the residual.

The Level 2 model for this study expressed as

$$Y_i = \beta_{0j} + \beta_{1j} (X_j) + \varepsilon_j$$

Where X_j is the group level variable (subscale), β_{0j} is the second stage intercept term and β_{1j} is the slope relating X_j to the intercept and slope terms from the Level 1 equation, and ε_j is the Level 2 residual.

The model was tested using Mplus software (Muthén & Muthén, 1998-2001). Quantitative assessment subscales variables (raters) were entered as the first level predictor variables. Questions were rated on their respective scale of 0 – 4 with 0 indicating the lowest level of transactional, transformational, or servant leadership attributes and 4 being the highest rating. Items for each subscale were averaged together to create a mean score. Constructive-development order scores were entered as the Level

2 predictor variable. These scores, range from 2, 2.2, 2.4, 2.6, 2.8 (within an Second Order), with over all range of scores 2 to 5, were obtained from the interpretation of the Subject-Object Interview. Subscale scores for transactional, transformational, and servant leadership (utilizing means and variance from first level scores) were used as Level 2 outcome variables.

Results of Analysis of Data Using Hierarchical Linear Modeling

The following results utilized the hierarchical linear modeling analysis that tested the subscales for the dependent variables as assessed between and within levels. Results on the tables indicate the three relationships.

- Between leaders' self-report scores and their constructive-development Order.
- Between raters' scores of leaders' behaviors and leaders' constructive-development Order.
- Between raters' scores of leaders' behaviors and leaders' self-reported leadership behaviors.

The two-tailed test found significant at 1.96 (positive or negative) in Est. / S.E. column, a Wald statistic which is the ratio of coefficient to its standard error resulting in a Z-value. To obtain significance in a two-tailed test, values must be at least 1.96 for a .01 significance level.

Results

Model results for testing each of the dependent variables and constructive-development order presented in Tables 14 - 30. The entire sample analysis of the data

utilizing the hierarchical linear model (left hand column on Tables 14 - 30), yielded significant, negative relationship between raters' measure on leaders' altruistic calling ($r = -1.97; p < .01$) and wisdom ($r = -2.61; p < .01$) and leaders' order of constructive-development.

A second analysis with the hierarchical linear model used a reduced sample ($n = 44$), eliminated the middle scores (3.2-3.4) from the range 2.0 to 5, splitting the remaining ($n = 44$) participants into two nearly equal groups (Below $n = 23$; Above $n = 21$) (see Table 2). The reduced sample analysis of the data (right hand column on Tables 11 - 27), yielded a significant, positive relationship between leaders' self-report of individual consideration ($r = 3.47; p < .01$). A significant, negative relationship existed between leaders' self-report management-by-exception ($r = -2.67; p < .01$) and wisdom ($r = -2.61; p < .01$) and constructive development order.

Hierarchical linear model results on idealized influence attributed subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 14).

Table 14

Model Results for Test of Constructive-Development Order and Multifactor Leadership Questionnaire Transformational Subscale Idealized Influence Attributed*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.32	.06	5.78	.34	.07	5.32
Between Level						
Leader/CD	-.04	.09	-.43	-.02	.10	-.16
Rater/CD	-.15	.10	-1.53	-.14	.11	-1.42
Rater/Leader	.03	.03	1.13	.05	.04	1.55
Intercepts						
Leader	3.20	.33	9.81	3.17	.34	1.55
Rater	3.81	.32	11.94	3.75	.33	9.46
Residual Variances						
Leader	.28	.06	4.46	.27	.07	4.11
Rater	.11	.05	2.03	.12	.06	1.94

Note: CD = Constructive-Development Order.

** $p < .01$ (non-significant)

No significant relationships existed between idealized influence attributed (Table 14) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on idealized influence behavior subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 15).

Table 15

Model Results for Test of Constructive-Development Order and Multifactor Leadership Questionnaire Transformational Subscale Idealized Influence Behavior*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.35	.05	6.96	.35	.06	6.32
Between Level						
Leader/CD	.09	.11	.82	.05	.11	.43
Rater/CD	.03	.10	.26	.04	.11	.38
Rater/Leader	.01	.04	.13	.04	.04	.93
Intercepts						
Leader	2.87	.37	7.79	3.04	.37	8.21
Rater	3.06	.33	9.44	2.99	.34	8.80
Residual Variances						
Leader	.36	.09	4.00	.28	.05	5.56
Rater	.13	.05	2.84	.12	.05	2.73

Note: CD = Constructive-Development Order.

** $p < .01$ (non-significant)

There were no significant relationships found between idealized influence behavior (Table 15) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on inspirational motivation subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 16).

Table 16

Model Results for Test of Constructive-Development Order and Multifactor Leadership Questionnaire Transformational Subscale Inspirational Motivation

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.31	.04	8.39	.29	.04	7.53
Between Level						
Leader/CD	-.06	.10	-.62	-.03	.09	-.33
Rater/CD	-.06	.08	-.72	-.03	.08	-.41
Rater/Leader	.04	.03	1.33	.05	.02	2.48**
Intercepts						
Leader	3.46	.32	10.89	3.43	.31	11.24
Rater	3.55	.27	13.24	3.49	.27	13.13
Residual Variances						
Leader	.28	.06	4.96	.20	.04	5.66
Rater	.11	.06	1.77	.10	.07	1.35

Note: CD = Constructive-Development Order.

** $p < .01$

There were no significant relationships found between inspirational motivation (Table 16) subscale and leaders' self-report, raters' assessment of leader and

constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on intellectual stimulation subscale between leaders' self-report, raters' assessment of leader and constructive-development Order and between leaders' and raters' assessment of leaders' behavior (Table 17).

Table 17

Model Results for Test of Constructive-Development Order and Multifactor Leadership Questionnaire Transformational Subscale Intellectual Stimulation*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.40	.06	6.82	.40	.07	6.00
Between Level						
Leader/CD	.08	.13	.61	.07	.13	.55
Rater/CD	-.02	.09	-.17	-.02	.09	-.26
Rater/Leader	.01	.03	.43	.02	.03	.59
Intercepts						
Leader	2.72	.42	6.43	2.77	.43	6.43
Rater	3.09	.29	10.68	3.10	.30	10.46
Residual Variances						
Leader	.38	.06	6.20	.37	.07	5.34
Rater	.08	.04	2.09	.08	.04	1.92

Note: CD = Constructive-Development Order.

** $p < .01$ (non-significant)

There were no significant relationships found between intellectual stimulation (Table 17) subscale and leaders' self-report, raters' assessment of leader and

constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on individual consideration subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 18).

Table 18

*Model Results for Test of Constructive-Development Order and Multifactor Leadership
Questionnaire Transformational Subscale Individual Consideration*

	Entire Sample (<i>N</i> = 54)			Sample Without Middle (<i>n</i> = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.38	.05	7.84	.38	.06	6.94
Between Level						
Leader/CD	.29	.09	3.30**	.31	.09	3.47**
Rater/CD	-.02	.10	-.21	-.01	.10	-.09
Rater/Leader	-.02	.03	-.75	.01	.03	.54
Intercepts						
Leader	2.33	.31	7.54	2.36	.31	7.67
Rater	3.27	.30	10.76	3.24	.31	10.44
Residual Variances						
Leader	.27	.08	3.62	.18	.03	6.50
Rater	.11	.04	3.99	.11	.04	2.81

Note: CD = Constructive-Development Order.

***p* < .01

There were significant relationships found between individual consideration ($N = 54$) ($r = 3.30$; $p < .01$) and ($n = 44$) ($r = 3.47$; $p < .01$) (Table 18) subscale and leaders' self-report and constructive-development Order. No significant relationship between raters' measure and constructive-development Order, and leaders' and raters' assessment of leaders' behavior were found.

Hierarchical linear model results on contingent reward subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 19).

Table 19

Model Results for Test of Constructive-Development Order and Multifactor Leadership
Questionnaire Transactional Subscale Contingent Reward*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.42	.07	6.34	.42	.08	5.52
Between Level						
Leader/CD	-.11	.14	-.80	-.12	.15	-.82
Rater/CD	-.04	.09	-.46	-.03	.09	-.26
Rater/Leader	-.03	.03	-.80	-.04	-.04	-1.06
Intercepts						
Leader	3.26	.45	7.24	3.35	.46	7.25
Rater	3.26	.29	11.21	3.21	.30	10.87
Residual Variances						
Leader	.46	.14	3.38	.04	.09	4.46
Rater	.06	.03	1.79	.07	.04	1.87

Note: CD = Constructive-Development Order.

** $p < .01$ (non-significant)

There were no significant relationships found between contingent reward (Table 19) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on management-by-exception active subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 20).

Table 20

Model Results for Test of Constructive-Development Order and Multifactor Leadership Questionnaire Transactional Subscale Management-by-Exception Active

	Entire Sample (<i>N</i> = 54)			Sample Without Middle (<i>n</i> = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.93	.09	10.45	.94	.09	10.18
Between Level						
Leader/CD	-.27	.12	-2.18**	-.31	.12	-2.67**
Rater/CD	-.02	.10	-.90	-.11	.09	-1.14
Rater/Leader	.04	.07	.59	.00	.06	.14
Intercepts						
Leader	2.33	.42	5.56	2.40	.40	5.97
Rater	1.89	.33	5.73	1.89	.31	6.07
Residual Variances						
Leader	.53	.11	4.94	.41	.08	4.97
Rater	.07	.06	1.05	.04	.06	.07

Note: CD = Constructive-Development Order.

***p* < .01

There were significant, negative relationships found between management-by-exception active ($N = 54$) ($r = -2.18; p < .01$) and ($n = 44$) ($r = -2.67; p < .01$) (Table 20) subscale and leaders' self-report and constructive-development Order. No significant relationship between raters' measure and constructive-development Order and leaders' and raters' assessment of leaders' behavior were found.

Hierarchical linear model results on management-by-exception passive subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 21).

Table 21

Model Results for Test of Constructive-Development Order and Multifactor Leadership Questionnaire Transactional Subscale Management-by-Exception Passive*

	Entire Sample (<i>N</i> = 54)			Sample Without Middle (<i>n</i> = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.35	.04	8.84	.32	.04	8.00
Between Level						
Leader/CD	.08	.15	.49	.09	.16	.06
Rater/CD	.06	.10	.60	.03	.10	.32
Rater/Leader	.09	.09	1.02	.11	.10	1.06
Intercepts						
Leader	.62	.49	1.27	.58	.49	1.18
Rater	.52	.32	1.64	.59	.32	1.82
Residual Variances						
Leader	.39	.12	3.13	.43	.15	2.92
Rater	.14	.06	2.13	.17	.08	2.24

Note: CD = Constructive-Development Order.

***p* < .01 (non-significant)

There were no significant relationships found between management-by-exception passive (Table 21) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on *laissez faire* subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 22).

Table 22

Model Results for Test of Constructive-Development Structure for Multifactor Leadership Questionnaire Transactional Subscale Laissez Faire*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.35	.08	4.34	.34	.09	3.86
Between Level						
Leader/CD	.00	.11	.02	-.01	.12	-.07
Rater/CD	.08	.06	1.40	.08	.06	1.33
Rater/Leader	.06	.05	1.10	.08	.06	1.26
Intercepts						
Leader	.59	.36	1.62	.56	.38	1.47
Rater	.17	.21	.85	.17	.21	.82
Residual Variances						
Leader	.22	.04	5.05	.22	.06	4.00
Rater	.06	.06	1.08	.08	.07	1.16

Note: CD = Constructive-Development Order.

** $p < .01$ (non-significant)

There were no significant relationships found between laissez faire (Table 22) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on extra effort outcomes subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 23).

Table 23

Model Results for Test of Constructive-Development Structure and Multifactor Leadership Questionnaire Outcomes Subscale Extra Effort*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.56	.09	6.14	.58	.11	5.49
Between Level						
Leader/CD	.10	.14	.72	.11	.14	.73
Rater/CD	-.10	.11	-.87	-.07	.11	-.64
Rater/Leader	.09	.06	1.55	.12	.07	1.68
Intercepts						
Leader	2.59	.45	5.78	2.59	.46	5.62
Rater	3.53	.36	9.92	3.54	.36	9.51
Residual Variances						
Leader	.38	.06	6.64	.39	.06	6.19
Rater	.12	.06	1.85	.14	.07	1.90

Note: CD = Constructive-Development Order.

** $p < .01$ (non-significant)

There were no significant relationships found between extra effort outcomes (Table 23) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on effectiveness outcomes subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 24).

Table 24

Model Results for Test of Constructive-Development Structure and Multifactor Leadership Questionnaire Outcomes Subscale Effectiveness*

	Entire Sample (<i>N</i> = 54)			Sample Without Middle (<i>n</i> = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.29	.04	6.69	.27	.05	5.88
Between Level						
Leader/CD	.17	.10	1.66	.17	.11	1.65
Rater/CD	-.15	.08	-1.73	-.13	.09	-1.54
Rater/Leader	-.03	.03	-1.10	.00	.02	.07
Intercepts						
Leader	2.66	.34	7.90	2.67	.35	7.71
Rater	3.85	.28	13.99	3.82	.27	13.93
Residual Variances						
Leader	.29	.09	3.18	.21	.04	5.03
Rater	.10	.05	1.96	.10	.06	1.78

Note: CD = Constructive-Development Order.

***p* < .01 (non-significant)

There were no significant relationships found between effectiveness outcomes (Table 24) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on satisfaction outcomes subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 25).

Table 25

Model Results for Test of Constructive-Development Structure and Multifactor Leadership Questionnaire Outcomes Subscale Satisfaction

	Entire Sample (N= 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.34	.06	6.17	.37	.06	5.77
Between Level						
Leader/CD	-.01	.10	-.11	-.01	.11	-.11
Rater/CD	-.17	.08	-1.97**	-.16	.09	-1.84
Rater/Leader	.03	.03	.89	.06	.03	1.97**
Intercepts						
Leader	3.32	.34	9.78	3.34	.34	9.73
Rater	4.01	.27	14.89	3.99	.28	14.21
Residual Variances						
Leader	.37	.10	3.62	.30	.06	5.30
Rater	.08	.05	1.71	.09	.05	1.68

Note: CD = Constructive-Development Order.

** $p < .01$

There were no significant relationships found between satisfaction outcomes (Table 25) subscale and leaders' self-report and leaders' and raters' assessment of

leaders' behavior. A significant, negative relationship was found between satisfaction outcomes and raters' assessment of leader and constructive-development Order ($N = 54$) ($r = -1.97; p < .01$).

Hierarchical linear model results on altruistic calling subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 26).

Table 26

*Model Results for Test of Constructive-Development Structure and Servant Leadership
Questionnaire Subscale Altruistic Calling*

	Entire Sample (<i>N</i> = 54)			Sample Without Middle (<i>n</i> = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.34	.06	6.17	.58	.11	5.20
Between Level						
Leader/CD	-.01	.10	-0.11	.14	.11	1.30
Rater/CD	-0.17	.08	-1.97**	-.16	.15	-1.07
Rater/Leader	.03	.03	.89	.13	.08	1.53
Intercepts						
Leader	3.32	.34	9.78	3.25	.33	9.73
Rater	4.01	.27	14.89	4.11	.50	8.30
Residual Variances						
Leader	.37	.10	3.62	.21	.06	3.56
Rater	.08	.05	1.71	.38	.13	2.88

Note: CD = Constructive-Development Order.

***p* < .01

There was a significant, negative relationship found between altruistic calling ($N= 54$) ($r = -1.97$; $p < .01$) (Table 26) subscale and raters' assessment of leader, and constructive-development Order. No significant relationship between leaders' self-report and constructive-development Order and leaders' and raters' assessment of leaders' behavior was found.

Hierarchical linear model results on emotional healing subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 27).

Table 27

Model Results for Test of Constructive-Development Structure and Servant Leadership
Questionnaire Subscale Emotional Healing*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.98	.15	6.45	.93	.16	5.83
Between Level						
Leader/CD	.05	.12	.40	.08	.12	.66
Rater/CD	-.29	.18	-1.68	-.25	.18	-1.41
Rater/Leader	.13	.07	1.79	.08	.07	1.12
Intercepts						
Leader	3.44	.34	8.75	3.39	.40	8.47
Rater	4.11	.61	6.74	3.94	.61	6.48
Residual Variances						
Leader	.38	.08	4.74	.35	.06	5.45
Rater	.55	.19	2.87	.64	.22	2.95

Note: CD = Constructive-Development Order.

** $p < .01$ (non-significant)

There were no significant relationships found between emotional healing (Table 27) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on wisdom subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 28).

Table 28

*Model Results for Test of Constructive-Development Structure and Servant Leadership
Questionnaire Subscale Wisdom*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.35	.06	6.01	.35	.06	5.46
Between Level						
Leader/CD	-.12	.17	-.70	-.14	.17	-.85
Rater/CD	-.26	.10	-2.61**	-.26	.10	-2.61**
Rater/Leader	.18	.09	1.95	.23	.11	2.21**
Intercepts						
Leader	4.21	.56	7.50	4.26	.56	7.59
Rater	4.97	.34	14.70	4.95	.35	14.29
Residual Variances						
Leader	.51	.08	6.14	.50	.09	5.43
Rater	.29	.13	1.95	.27	.15	1.85

Note: CD = Constructive-Development Order.

** $p < .01$

There was a significant, negative relationship found between wisdom ($N = 54$) ($r = -2.61; p < .01$) and ($n = 44$) ($r = -2.61; p < .01$) (Table 28) subscale and raters' assessment of leader and constructive-development Order. No significant relationship between leaders' self-report and constructive-development Order and leaders' and raters' assessment of leaders' behavior.

Hierarchical linear model results on persuasive mapping subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 29).

Table 29

*Model Results for Test of Constructive-Development Structure and Servant Leadership
Questionnaire Subscale Persuasive Mapping*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.56	.11	5.11	.61	.13	4.85
Between Level						
Leader/CD	.11	.11	1.04	.10	.11	.95
Rater/CD	-.26	.14	-1.89	-.24	.14	-1.67
Rater/Leader	.02	.07	2.91**	.21	.08	2.73**
Intercepts						
Leader	3.27	.33	9.85	3.30	.34	9.84
Rater	4.40	.45	9.83	4.32	.46	9.46
Residual Variances						
Leader	.27	.05	5.26	.24	.05	4.52
Rater	.32	.12	2.76	.33	.13	2.49

Note: CD = Constructive-Development Order.

** $p < .01$

There were no significant relationships found between persuasive mapping (Table 29) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' persuasive mapping behavior.

Hierarchical linear model results on organizational stewardship subscale between leaders' self-report, raters' assessment of leader and constructive-development Order, and between leaders' and raters' assessment of leaders' behavior (Table 30).

Table 30

*Model Results for Test of Constructive-Development Structure and Servant Leadership
Questionnaire Subscale Organizational Stewardship*

	Entire Sample (N = 54)			Sample Without Middle (n = 44)		
	Estimates	S.E.	Est./S.E.	Estimates	S.E.	Est./S.E.
Within Level Variances	.46	.10	4.73	.46	.11	4.32
Between Level						
Leader/CD	.14	.16	.92	.14	.16	.86
Rater/CD	-.13	.14	-.91	-.13	.14	-.92
Rater/Leader	.19	.09	2.23*	.21	.10	2.07*
Intercepts						
Leader	3.79	.54	7.05	3.83	.55	6.98
Rater	4.50	.47	9.58	4.54	.48	9.49
Residual Variances						
Leader	.43	.10	4.50	.45	.12	3.82
Rater	.40	.16	2.44	.32	.11	2.81

Note: CD = Constructive-Development Order.

** $p < .01$

There were no significant relationships found between organizational stewardship (Table 30) subscale and leaders' self-report, raters' assessment of leader and constructive-development Order, and leaders' and raters' assessment of leaders' behavior.

Summary of Hierarchical Linear Modeling

The entire sample analysis of the data utilized the hierarchical linear model. The reduced sample analysis of the data (right hand column on Tables 14 -30) yielded significant, positive relationship between leaders' self-report of individual consideration ($N = 54$) ($r = 3.30$; $p < .01$) and ($n = 44$) ($r = 3.47$; $p < .01$) and constructive-development Order. Significant, negative relationship was found between leaders' self-report management-by-exception ($N = 54$) ($r = -2.18$; $p < .01$) and ($n = 44$) ($r = -2.67$; $p < .01$) and constructive-development Order. Significant, negative relationship was found between raters' assessment of leaders' altruistic calling ($N = 54$) ($r = -1.97$; $p < .01$) and wisdom ($N = 54$) ($r = -2.61$; $p < .01$) and ($n = 44$) ($r = -2.61$; $p < .01$) and constructive-development Order.

Post Hoc Analysis

To test for within and between group analyses, hierarchical linear modeling analysis was used in the study. After the initial analysis of simple statistics, correlations and the hierarchical linear modeling output, it was determined that correlations between the independent and dependent variables produced very little correlations between a

leaders' constructive-development order and scores on the subscales of the Multifactor and Servant Leadership Questionnaires. Previous research studies indicate that most adults score in the range of third Order (3.0 coding in this study) (Kegan, 1994; Lahey, 1988). The 409 raters in this study rated 54 leaders on two separate assessments (N=217 MLQ; N=192 SLQ) producing 54 groups with an average of four raters per leader. The possibility that there would be more similarities within groups than between groups existed (Osborne, 2000). The participants in this study were all engaged in purposeful development of their own leadership. Further, the participants selected their own raters, which signify a professional or personal relationship with the leader participant. Two well-defined categories of participants were members of two categories as identified by age group and by level of education (Table 2). The assumption of independence of responses would be violated (Osborne, 2000).

With the mid-range scores removed (3.2-3.4) for the range 2.0 to 5) from the scores for constructive-development Order, simple statistics, correlations and independent samples test were calculated for all variables of the study, splitting the remaining n=44 participants into two nearly equal groups (Below $n = 23$; Above $n = 21$).

There were positive relationships found between constructive-development Order and several dependent variables. There was a significant, positive relationship between leader constructive-development order and intellectual stimulation ($r = .44$; $p < .01$.); individual consideration ($r = .44$; $p < .01$.) and wisdom ($r = .32$; $p < .05$.) A significant, negative relationship was found between leader constructive-development Order and management-by-exception active ($r = -.31$; $p < .05$.).

Simple statistics and correlations on leader self-report of transformational leadership with constructive-development order and hierarchical linear modeling below and above groups ($n = 44$) were calculated for the without middle analysis.

Transformational subscale included idealized influence attributed, idealized influence behaviors, inspirational motivation, intellectual stimulation and individual consideration. (Table 31).

Table 31

Simple Statistics and Correlation Matrix Without Middle on Multifactor Leadership Questionnaire Transformational Subscales and Constructive-Development Order Leader Self-Report (n = 44)

Variable		M	SD	CD	Ila	Ilb	IM	IS	IC
CD		3.26	.63	.84					
Ila	Below	3.10	.59	-.02	.60				
	Above	3.13	.45						
Ilb	Below	3.22	.53	.06	.46**	.74			
	Above	3.15	.56						
IM	Below	3.38	.47	-.04	.27	.46**	.72		
	Above	3.29	.44						
IS	Below	3.00	.62	.44**	.44**	.68**	.40**	.77	
	Above	3.01	.63						
IC	Below	3.23	.48	.44**	.28	.52**	.33*	.54**	.69
	Above	3.50	.45						

Note. Below = Group below 3.2 score on Subject-Object Interview; (n = 23); Above = Group above score of 3.4 on the Subject-Object Interview (n = 21); CD = Constructive-Development Order; Ila = Idealized Influence Attributed; Ilb = Idealized Influence Behavior; IM = Inspirational Motivation; IS = Intellectual Stimulation; IC = Individual Consideration; Scale reliabilities on the diagonal. Scale Range: 0 (Not at all) to 4 (Frequently, if not always).

** $p < .01$

There was a significant, positive relationship between leader constructive-development order and intellectual stimulation ($r = .44; p < .01.$); individual consideration ($r = .44; p < .01.$) transformational leadership subscales and constructive-development Order for below and above groups (Table 31).

Simple statistics and correlations on raters' assessment of leaders' transformational leadership with constructive-development Order and hierarchical linear modeling below and above groups ($n = 44$) were calculated for the without middle analysis (Table 32).

Table 32

Simple Statistics and Correlation Matrix Without Middle Multifactor Leadership Questionnaire Transformational Subscales and Constructive-Development Order Rater Report (n = 44)

Variable	Group	M	SD	CD	Ila	Ilb	IM	IS	IC
CD		3.26	.63	.84					
Ila	Below	3.38	.43	-.17	.74				
	Above	3.21	.43						
Ilb	Below	3.06	.50	.13	.47**	.65			
	Above	3.18	.53						
IM	Below	3.42	.45	-.03	.63**	.60**	.82		
	Above	3.37	.33						
IS	Below	3.05	.46	.03	.59**	.62**	.54**	.76	
	Above	3.05							
IC	Below	3.21	.42	.05	.59**	.56**	.48**	.82**	.69
	Above	3.27	.46						

Note. Below = Group below 3.2 score on Subject-Object Interview; (N = 23); Above = Group above score of 3.4 on the Subject-Object Interview (N = 21); CD = Constructive-Development Order; Ila = Idealized Influence Attributed; Ilb = Idealized Influence Behavior; IM = Inspirational Motivation; IS = Intellectual Stimulation; IC = Individual Consideration; Scale reliabilities on the diagonal. Scale Range: 0 (Not at all) to 4 (Frequently, if not always).

** $p < .01$

There were no significant relationship between leader constructive-development order and raters' assessment of leader transformational behaviors and for below and above groups (Table 32).

Simple statistics and correlations on leaders' self-report transactional leadership with constructive-development order and hierarchical linear modeling below and above groups ($n = 44$) were calculated for the without middle analysis (Table 33).

Table 33

*Simple Statistics and Correlation Matrix Without Middle Multifactor Leadership
Questionnaire Transactional Subscales and Constructive-Development Order Leader
Self-Report (n = 44)*

Variable	Group	M	SD	CD	CR	MBEA	MBEP	LF
CD		3.26	.63	.84				
CR	Below	3.00	.57	-.13	.57			
	Above	2.92	.73					
MBEA	Below	1.59	.64	-.31*	.02	.71		
	Above	1.18	.68					
MBEP	Below	.93	.73	.10	-.24	.15	.62	
	Above	.85	.59					
LF	Below	.58	.47	-.00	-.21	.21	.47**	.33
	Above	.49	.49					

Note. Below = Group below 3.2 score on Subject-Object Interview; (N = 23); Above = Group above score of 3.4 on the Subject-Object Interview (N = 21); CD = Constructive-Development Order; CR = Contingent Reward; MBEA = Management-by-Exception Active; MBEP = Management-by-Exception Passive; LF = Laissez Faire. Scale reliabilities on the diagonal. Scale Range: 0 (Not at all) to 4 (Frequently, if not always).

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

There were no significant relationship between leader constructive-development order and leaders' self-report transactional behaviors and for below and above groups (Table 33).

Simple statistics and correlations on raters' assessment of leaders' transactional leadership with constructive-development order and hierarchical linear modeling below and above groups ($n = 44$) were calculated for the without middle analysis (Table 34).

Table 34

*Simple Statistics and Correlation Matrix Without Middle Multifactor Leadership
Questionnaire Transactional Subscales and Constructive-Development Order Rater
Report (n = 44)*

Variable	Group	M	SD	CD	CR	MBEA	MBEP	LF
CD		3.26	.63	.84				
CR	Below	3.10	.42	.04	.66			
	Above	3.16	.46					
MBEA	Below	1.44	.55	-.09	-.02	.73		
	Above	1.59	.47					
MBEP	Below	.69	.63	.05	-.31*	-.20	.61	
	Above	.62	.70					
LF	Below	.42	.43	.04	-.45**	.06	.69**	.58
	Above	.36	.29					

Note. Below = Group below 3.2 score on Subject-Object Interview; (N = 23); Above = Group above score of 3.4 on the Subject-Object Interview (N = 21); CD = Constructive-Development Order; CR = Contingent Reward; MBEA = Management-by-Exception Active; MBEP = Management-by-Exception Passive; LF = Laissez Faire. Scale reliabilities on the diagonal. Scale Range: 0 (Not at all) to 4 (Frequently, if not always).

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

There were no significant relationship between leader constructive-development order and raters' assessment of leader transactional behaviors and for below and above groups (Table 34).

Simple statistics and correlations on leaders' self-report outcomes subscale leadership with constructive-development order and hierarchical linear modeling below and above groups ($n = 44$) were calculated for the without middle analysis (Table 35).

Table 35

*Simple Statistics and Correlation Matrix Without Middle Multifactor Leadership
Questionnaire Outcomes Subscales and Constructive-Development Order Leader Self
Report (n = 44)*

Variable	Group	M	SD	CD	EE	E	S
CD		3.26	.63	.84			
EE	Below	2.86	.59	.11	.65		
	Above	3.02	.70				
E	Below	3.13	.49	.25	.47**	.59	
	Above	3.35	.46				
S	Below	3.33	.42	-.01	.44**	.58**	.68
	Above	3.29	.68				

Note. Below = Group below 3.2 score on Subject-Object Interview; (N = 23); Above = Group above score of 3.4 on the Subject-Object Interview (N = 21); CD = Constructive-Development Order; EE = Extra Effort; E = Effectiveness; S = Satisfaction. Scale reliabilities on the diagonal. Scale Range: 0 (Not at all) to 4 (Frequently, if not always).

** $p < .01$

There were no significant relationship between leader constructive-development order and leaders' self-report of outcomes and for below and above groups (Table 35).

Simple statistics and correlations on raters' assessment of leaders' outcomes subscale leadership with constructive-development order and hierarchical linear modeling below and above groups ($n = 44$) were calculated for the without middle analysis (Table 36).

Table 36

*Simple Statistics and Correlation Matrix Without Middle Multifactor Leadership**Questionnaire Outcomes Subscales and Constructive-Development Order Rater Report**(n = 44)*

Variable	Group	M	SD	CD	EE	E	S
CD		3.26	.63	.84			
EE	Below	3.20	.54	-.01	.80		
	Above	3.27	.51				
E	Below	3.45	.43	-.17	.77**	.79	
	Above	3.38	.36				
S	Below	3.57	.41	-.21	.71**	.78**	.78
	Above	3.39	.37				

Note. Below = Group below 3.2 score on Subject-Object Interview; (N = 23); Above = Group above score of 3.4 on the Subject-Object Interview (N = 21); CD = Constructive-Development Order; EE = Extra Effort; E = Effectiveness; S = Satisfaction. Scale reliabilities on the diagonal. Scale Range: 0 (Not at all) to 4 (Frequently, if not always).

** $p < .01$

There were no significant relationship between leader constructive-development order and raters' assessment of leaders' outcomes and for below and above groups (Table 36).

Simple statistics and correlations on raters' assessment of leaders' servant leadership with constructive-development order and hierarchical linear modeling below and above groups ($n = 44$) were calculated for the without middle analysis (Table 37).

Table 37

*Simple Statistics and Correlation Matrix Without Middle Servant Leadership
Questionnaire Subscales and Constructive-Development Order Leader Self Report
(n= 44)*

Variable	Group	M	SD	CD	AC	EH	W	PM	OS
CD		3.26	.63	.84					
AC	Below	3.58	.47	.20	.87				
	Above	3.81	.45						
EH	Below	3.60	.65	.09	.22	.78			
	Above	3.68	.56						
W	Below	3.79	.80	-.13	.35*	.38*	.86		
	Above	3.82	.65						
PM	Below	3.52	.45	.14	.38*	.28	.39**	.76	
	Above	3.75	.54						
OS	Below	4.18	.77	.14	.61**	.27	.24	.38**	.87
	Above	4.36	.57						

Note. Below = Group below 3.2 score on Subject-Object Interview; (N = 23); Above = Group above score of 3.4 on the Subject-Object Interview (N = 21); CD = Constructive-Development Order; AC = Altruistic Calling; EH = Emotional Healing; W = Wisdom; PM = Persuasive Mapping; OS = Organizational Stewardship; Scale reliabilities on the diagonal. Scale Range: 0 (Never) to 4 (Always).

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

There were no significant relationship between leader constructive-development order and leaders' self-report of servant leadership and for below and above groups (Table 37).

Simple statistics and correlations on raters' assessment of leaders' servant leadership with constructive-development order and hierarchical linear modeling below and above groups ($n = 44$) were calculated for the without middle analysis (Table 38).

Table 38

*Simple Statistics and Correlation Matrix Without Middle Servant Leadership**Questionnaire Subscales and Constructive-Development Order Rater Report (n = 44)*

Variable	Group	M	SD	CD	AC	EH	W	PM	OS
CD		3.26	.64	.84					
AC	Below	3.63	.79	-.13	.92				
	Above	3.57	.68						
EH	Below	3.10	1.17	-.15	.74**	.94			
	Above	3.18	.74						
W	Below	4.18	.72	.32*	.66**	.68**	.93		
	Above	4.07	.48						
PM	Below	3.57	.79	-.22	.68**	.72**	.67**	.91	
	Above	3.55	.59						
OS	Below	4.15	.74	-.16	.68**	.71**	.60**	.81**	.92
	Above	4.13	.57						

Note. Below = Group below 3.2 score on Subject-Object Interview; (N = 23); Above = Group above score of 3.4 on the Subject-Object Interview (N = 21); CD = Constructive-Development Order; AC = Altruistic Calling; EH = Emotional Healing; W = Wisdom; PM = Persuasive Mapping; OS = Organizational Stewardship; Scale reliabilities on the diagonal. Scale Range: 0 (Never) to 4 (Always).

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

There was a significant, positive relationship between leader wisdom ($r = .32$; $p < .05$.) servant leadership and constructive-development order for below and above groups (Table 38).

Summary of Post hoc Results

Positive relationships were found between constructive-development order and several dependent variables in post hoc analysis reducing the sample size ($N = 54$) by eliminating the mid-range constructive-development scores 3.2-3.4, reducing a middle effect ($n = 44$). There was a significant, positive relationship between leader constructive-development order and intellectual stimulation ($r = .44$; $p < .01$.); individual consideration ($r = .44$; $p < .01$.) and wisdom ($r = .32$; $p < .05$.) A significant, negative relationship was found between leader constructive-development order and active management-by-exception ($r = -.31$; $p < .05$.)

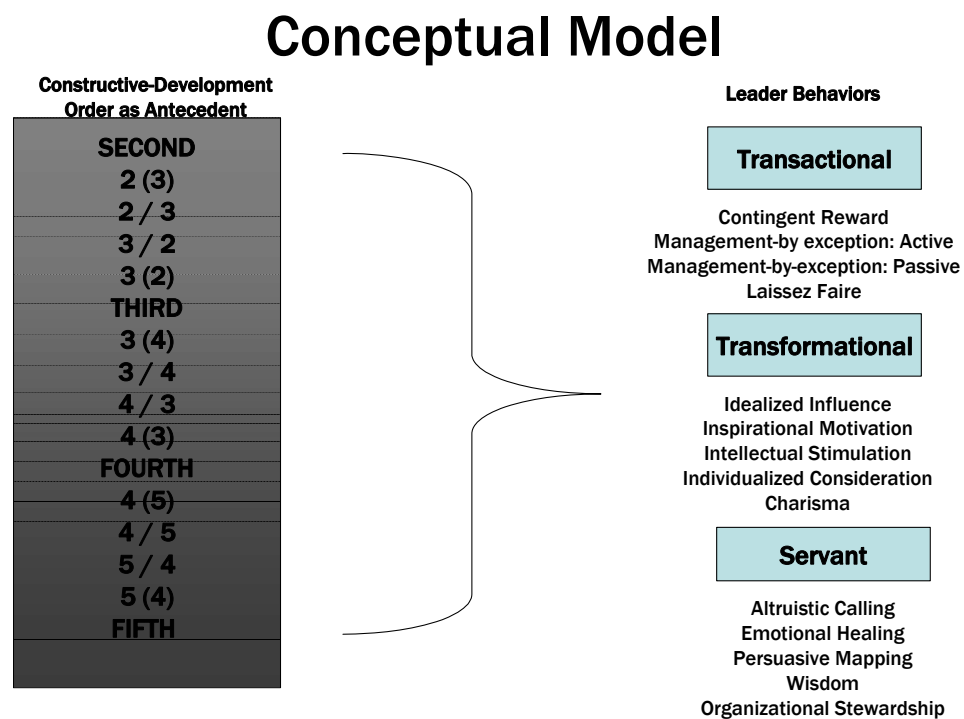
An independent samples test was conducted for Levene's Test for quality of variances and t test for equality of means on the reduced sample. Only one variable was found to reject H_0 . The participant sample below the middle averaged $M = 1.59$ for management-by-exception active with $SD = .64$. Statistical analysis indicates that a leaders' behavior (focus on mistakes, failures and attention to standards) was significantly more than expected by chance, $n = 42$, $t = 2.05$, $p < .05$, and effect size large, $d = 2.02$.

Summary of Data Analysis

The overall analysis of the data included correlations between the leaders' transactional, transformational, servant leadership behaviors, and leader constructive-development order. The study performed analyses on the data utilizing a hierarchical linear model to determine the between and with analysis to determine the group effect of leaders and raters 'nested' evaluation of the specific leadership behaviors as self-reported by the leader and raters by others selected by the rater. The constructive-development order of the leader was the independent variable in the study used to predict the leader behavior.

The hypotheses for the study (Appendix B) were rejected as no significant relationship was found between specific constructive-development Order as predictors of transactional, transformational, and servant leadership behaviors of leaders. While several measures of leaders' behaviors show some statistical significance, the overall sample was not large enough for the specific Orders and the transition points to make any substantive conclusions. See Figure 8 for Conceptual Model resulting from the results of this study.

Figure 8 Model Following Hypotheses Testing



CHAPTER V

Conclusions and Recommendations

This chapter contains conclusions, recommendations, implications for practice and directions for future research for the study.

Conclusions

This study found that a leader's level of meaning-making and construction of understanding did not predict their transactional, transformational, and servant leadership behaviors. Fifty-four leaders and 409 raters assessed leaders' behaviors with the Multifactor Leadership Questionnaire, Form 5x short (Avolio & Bass, 2004) and Servant Leadership Questionnaire (Barbuto & Wheeler, 2006). The 54 leaders were interviewed using the Subject-Object Interview protocol to assess their level of meaning-making based on constructive-development theory (Kegan, 1982, 1994).

Relationships were expected between the levels of leaders' constructive-development and the leaders' behaviors. Previous work linked constructive-development with transactional and transformational leadership proposing a three-stage developmental model of leadership as shown in Figure 4 (Kuhnert & Lewis, 1987). This study did not support the model of constructive-development's ability to predict leadership behaviors.

Discussion of Findings & Hypotheses Testing

The results of this study show that leaders' behaviors may be predicted by variables other than the constructive-development Order (level of meaning-making ability) of leaders. The hypotheses of this study included variables that were measured

by leader behavior instruments that aggregate ratings from both leaders and raters (followers). Hypotheses 1a-1d were not accepted as the transactional leadership behaviors of contingent reward, management-by-exception active and passive, and laissez faire were not significantly related to constructive development. Hypotheses 2a-2c and 2e were not accepted as the transformational leadership behaviors of idealized influence (attributed and behaviors), inspirational motivation, and individualized consideration were not significantly related to constructive-development. Hypothesis 2d was not accepted as the transformational leadership behavior of intellectual stimulation was not significantly related to constructive-development. Hypothesis 3a was not accepted as the servant leadership behavior of organizational stewardship was not significantly related to constructive-development. Hypotheses 3b-3e were not accepted as the servant leadership behaviors of altruistic calling, emotional healing, wisdom, and persuasive mapping were not significantly related to constructive-development.

Past studies have predicted transactional and transformational leadership behaviors with variables including Myers-Briggs Type Indicator (Atwater & Yammarino, 1993), effectiveness (Lowe & Kroeck, 1996), work satisfaction (Singer & Singer, 1990), and motivation (Barbuto, Fritz, & Marx, 2000). Kuhnert & Lewis (1987) proposed studying transactional and transformational leadership and specific levels of constructive-development. Few studies have measured transactional and transformational leadership behaviors and leaders' levels of constructing meaning from his/her experiences (Kennard, 2002; Lucius & Kuhnert, 1999; Benay, 1997).

Transformational Leadership and a Leader's Level of Meaning-Making

This study had several results related to leaders' behaviors and exchange processes between leaders and followers. Leaders' use of active management-by-exception impacts his/her response to followers' failures, mistakes, and adherence to standards. The leaders in this study acknowledged the overuse of managing others based upon rules, standards, and past mistakes in their self-ratings. This suggests that a leader's achieved level of constructive-development may be in conflict with these transactional behaviors. The leaders in this study averaged 3.2 in their constructive-development Order ($M = 3.2$). Individuals in Third Order have achieved the ability to subordinate their desires and needs to those of others and balance between them. For individuals at Third Order, there is little sense of what they desire outside of others' expectations.

This overuse of rules, standards, and remembering past failures may result from the leaders' perceptions of what others ask of their ability to 'be' leaders. In constructive-development theory, studies have found adults clustered at Third Order (Kegan, 1982, 1994). Individuals at this level struggle to determine their own expectations and to negotiate the expectations of others. For leaders in this study, high use of active management-by-exception may find the leader attempting to meet organizational expectations by assuring that followers adhere to the standards and rules. This discourages repeat mistakes and allows the leader to hold past performance over followers' heads to encourage meeting expectations.

At the Third Order, leaders follow the known standards and expectations out of loyalty to the organization. Leaders would feel they had let their superiors down if they broke those expectations or standards. Leaders may perceive activities such as focusing

on meeting standards and procedures provide significant support (individual consideration) to others in the organization. By managing others closely based on the rules (active management-by-exception), the leader works with followers to prevent them from making mistakes in judgment. This close management of performance may seem to the leader to be providing individual development and growth for the followers. While the climate created by the leader, from their perspective, may be supportive through coaching and teaching the rules, the focus is on meeting the standards and expectations and not failing. This objective would not be considered developmental for the individual but more for the preservation of the organization and its systems.

Leaders in this study believed that they provided stimulation to followers of their organizations to be innovative and creative to solve problems in new ways (intellectual stimulation). The development of teams in the workplace and in organizations may be a way to 'stimulate' followers' efforts to be innovative and creative. The leader encourages members of the organization to question assumptions, analyze processes, reframe the problems, and approach problem solving in new ways. While leaders believe they provide followers with support for this activity, the raters in this study did not support that perception in assessing leaders intellectual stimulation. One reason for this finding may be in the final decision making that results from extensive work in teams.

Because most leaders operate out of constructive-development Third Order, they look for a respected other to help them make difficult and important decisions. For example, leaders can buy into the stimulation of new ways of thinking, innovating and problem solving. However, if they are not ready to allow followers make the decision and are dependent on those above them in the organization, the leaders are less likely to fully

accept followers work. Thus, after expending the time and energy responding in innovate and supportive ways, many followers believe their work is discounted leaving them to do only what the leader (or the leader above) decides. The 'who' of the final decision-making authority may be the culprit of the mismatch in perception of the leader's ability to stimulate innovations.

Servant Leadership and Leader's Level of Meaning-Making

Studies in the area of servant leadership have few empirical findings at this point. While scholarly writing on servant leadership is on the rise, a clear definition is needed to focus on these behaviors. The scale development of the Servant Leadership Questionnaire (Barbuto & Wheeler, 2006), shows promise to provide direction for more research.

The appeal of servant leadership is, in part, the selfless concern for the welfare and needs of others. Developing a leader who seeks to serve others' greatest needs is generating a growing interest for scholarly research (Sendjaya & Sarros, 2002).

In this study, one finding from the five attributes of servant leadership behavior was significant (Barbuto & Wheeler, 2006). Followers' ratings indicated a leader's wisdom, (awareness and foresight), had a positive connection with the leader's constructive-development Order. A case could be made that wisdom, as defined in servant leadership, was little more than the leader's focus on the expectations of the organization. While this may be perceived as wisdom, it could also be a leader's ability to be knowledgeable about the environment and culture of the organization. The Third Order leaders are embedded closely with being loyal to the mission, purpose, and vision of the organization. They find their leadership defined by the expectations of those above

and below in the organization. Thus, leaders have a dependency to know (wisdom) what is going on within the organization to have acceptance of his/her leadership from supervisors and subordinates.

This study used a broad sample of subjects with a wide educational attainment background (high school to terminal degree), wide age range (17 – 55 years of age) and leader involvement in a broad range of organization and workplace environments. A focused study of particular leaders in one demographic might yield different outcomes. For example, a study of leaders 40 years of age and older, might find a more advanced constructive-development Order overall.

Strength of Findings

The major strength of this study was that it is the first to test relationships between leaders' levels of constructive-development Order and leadership including transactional, transformational, and servant leadership. Previous work suggested linking cognitive and personality differences to the study of leadership (Kuhnert & Lewis, 1987; Lucius & Kuhnert, 1999). This study moved beyond postulations to test these differences empirically. Though the findings in this study were small, they achieved significance in several instances. Building upon this research is necessary to determine if similar demographic samples would yield different results.

Increased use of constructive-development pedagogy in the growing field of executive leadership coaching has resulted in several researchers from varied universities and companies utilizing the Subject-Object Interview (Fitzgerald & Garvey Berger, 2002). The potential for longitudinal research from this study exists with the 20

college- aged leaders from this study as well as a sub-set of others. More research is necessary to truly identify the long-term effect of constructive-development Order on the field of leadership. The work in the area of adaptive leadership (Heifetz, 1994; Daloz Parks, 2006) suggest that the complexity of developing a “way of being” in the world as a contributing member of society springs from an understanding of individual ability to construct meaning from one’s experiences.

Recommendations

Implications for Further Research

This study the first to examine the role of leaders’ levels of constructive-development Order and leadership behaviors of transactional, transformational, and servant leadership. While the findings were limited, the results provided opportunity for replication to test the hypothesized model. Studies focused on more controlled segment populations may yield different results based on demographics such as educational level, age span, larger sample size, and additional measures of leader behavior. Additionally, measures of followers’ constructive-development Order would strengthen the study. Longitudinal study of leaders to document the transitions of their constructive-development Order would help to better define the conditions needed to promote leaders’ development to higher levels. Another opportunity for future research would be to identify Fourth Order leaders and their organizations and look at behaviors and outcomes.

A final implication for research would be to consider the ideology of organizations, leaders, and members who make up the organizations. Ideology refers to our basic and often unexamined assumptions about how things are or how they should be

(Watzlawick, 1984). One study sought to explore the relationship between ideology and organizational practices (Geist & Dreyer, 1993.) The study examined how people and organizations define and control what is considered appropriate, professional, or ordinary communication through leader and customer interaction. Ideology has powerful influence linked to everyday organizations that structures our thoughts and controls our interpretations of reality. This may be beneath our awareness unless we stop to reflect upon our experience.

These powerful systems affect *how* leaders and followers perceive leadership in organizations as well as the *way* leadership is perceived. One of the hallmarks in constructive-development theory is the individual's movement from understanding *how* they understand their experiences and the *way* they understand. The ability to reflect upon the ideology that is within an organization comes from Fourth Order individuals (Kegan, 1982, 1994).

In organizations, employees at all levels willingly adopt and enforce the legitimate power of organizations, society, or a system with acceptance and often without challenge (Habermas, 1972). The willingness to organize behavior or response around a rule system, known as critical theory, often finds employees justifying their actions based upon "just doing my job," without consideration for the actions or accountability (a Fourth Order ability). The simultaneous study of both the leader's and follower's constructive-developmental Order may yield further understanding of our beliefs in relation to leadership.

Implications for Practice

Leadership programs could be impacted by combining the understanding of the way individuals develop over time and their leadership behaviors. One leadership model intervention with long-term effect uses a model of assessment, challenge and support, with a foundation of developmental experiences (McCauley, Moxley, & Van Velsor, 1998). While assessment of specific leadership behaviors has been common practice in the management and leadership fields, the assessment of leader cognitive and constructive-development Order may assist in the further development of leadership capabilities. While the life-span development of humans has focused on birth to the college years (Erikson, 1968; Kohlberg, 1969, 1971; Perry, 1970; Piaget, 1972; Baxter-Magolda, 1992, 1999) a new wave of developmental theory for adults, grounded in solid, empirical research, could further not only leadership in organizations, but leadership in all types of human endeavors.

Limitations of the Study

There are several limitations of this study. The use of the Subject-Object Interview method presents risk for the researcher as it is vulnerable to interviewer bias. The structure of the interview has the researcher focusing on the material presented by the participant and focusing on measuring their contribution connected with the definitions of the various transition points. The risk of 'grooving' with the participant in an empathic way can lead the researcher to unintended responses and interpretation.

The interview is subjective as control on the content revealed lies with the participant and the ability of the researcher to draw out authentic response. The

interpretation of the results involves careful review and attention to ‘voice’ of the interview as not to mistake particular responses for one Order over another without confirming them at several points throughout the transcript. The other limitation is the time intensity of the Subject-Object Interview. The interviews, typically 60 minutes in length, are recorded, transcribed, and interpreted. Interpretation can take as many as seven to ten hours to determine results and ratings.

The interviews are rich as dialogic exchanges allow participants to discover the *ways* they create their own understanding. The opportunity to increase understanding of the way humans construct meaning is worth the effort to help leaders further invest in their own developmental process.

An improvement to the methodology of this study would be a more seamless connection between the web-based assessments for the raters. Stronger rater response and the consistency of the same raters assessing a leader’s behavior on both instruments would have been assured if the systems were connected. While paper surveys were an option for this study, the advantage of web-based survey systems was the portability of data to the software for analysis.

The research was presented to potential participants as a way to study leadership behaviors and how leaders make meaning from their experiences. However, the Subject-Object Interview protocol does not direct participants in that vein and guides response to a broad view of their personal experience, rather than only as a leaders. Some respondents had difficulty with the personal nature of the interview and the researcher took time to assure the participants of the confidentiality and purpose to understand how they think about their experiences. Many times participant would steer his/her response

to very leader “centric” examples versus allowing themselves to explore all aspects of their life through the protocol. While this may not appear problematic, it creates the potential for response bias from participants discussing experiences that may have more fully reflected their constructive-development Order.

One observation about those individuals chosen by most leaders to assess their leadership behaviors found the raters to be heavily ‘above’ the leaders in the organizational structure. Leaders identified if the rater was above, a peer or below them in the structure. Future research should direct the leader to provide raters across these three categories to provide a more balanced response for rating leaders.

Directions for Future Research

Empirical study is needed to test the relationship between transactional, transformational, and servant leadership. While not a focus of this study, several significant, positive relationships exist in the findings of this research that have implications for furthering the understanding of servant leadership.

Future research testing constructive-development Order with other emerging leadership topics such as on authentic, transcendent, and global leadership lends itself to a promising line inquiry. The early writings in these areas indicate a connection to leading in a post modern and complex world. These leadership concepts offer study into the notion that leadership is not about power and wielding authority or about the personality of the leader, but rather the presence the leader holds with others to foster collective actions to respond in today’s complex world.

Summary

This study examined the effects of a leader's levels of constructing understanding from their experiences and the way others experience their transactional, transformational, and servant leadership behaviors.

One finding in this study was that followers rating of leader wisdom (servant leadership attributed), had a positive connection with the leader's level of meaning-making (constructive-development Order). The leader's wisdom (ability to be alert to what is occurring around them) showed strength in this study.

Another finding suggests that a leader's level of development may be in conflict with managing others based on loyalty to the rules and standards of the organization. Leaders at the constructive-developmental Third Order, are loyal to the organization mission, purpose, and goals *first*. This finding has strong implications for assisting leaders in understanding that the development of those around them does not need to focus on meeting only the goals of the organization.

As one of the few known studies of leader's behaviors and constructive-development theory, this research holds promise for longitudinal study and replication to increase the understanding of how leaders can rise to the behaviors as outlined in the transformational and servant leadership theories. This type of study could provide valuable information and insights for encouraging the development of individuals and organizations who work on problems and processes in today's complex organizations.

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APPENDIX

APPENDIX A

Definition of Terms

Appendix A

Definitions of Key Terms

Altruistic calling	Leader's deep-rooted aspiration to make a positive change in the lives of others.
Antecedents	An experience or behavior that exists as a condition before other behavior and may be used to predict future behavior.
Cognitive development	Active construction of knowledge adapted to fit with the environment and the external world through on going experiences through life span.
Constructive-development	Theory that believes that systems by which people make meaning grow and change over time, through life span.
Contingent reward	Provides clarification on what needs accomplishing and exchanges rewards for services.
Emotional healing	Leader's dedication and skill to facilitate spiritual recovery from suffering or distress.
Fifth Order Self-transformational	Very few adults (also referred to a Post-Modern Mind) Ability to have own meaning-making system and to realize that there are faults in even having own meaning-making system. Sees the similarities rather than the differences between systems. Likely

to help communities and leaders mediate between the commonalities.

First Order – Impulsive

Young children – durable objects not understood, cannot hold ideas in their head very long. Need constant supervision and reminders of the rules.

Follower

A subordinate of the leader who makes a voluntary choice to follow the leader; not a function of the hierarchy in an organization.

Fourth Order – Self-Authoring

Some adults (also referred to a Modern Mind) - achieved what is obtained in Third Order and now has a self that is defined outside of its relationships to others. Previous opinions and desires of others that were Subject to them, are internalized, and do not have control over them and now Object. Able to examine and mediate over these rule systems. Has own self-governing system to make decisions and mediate conflicts. At the Order feel empathy for others and take others needs/desires into consideration when making decisions. Unlike Third Order, this Order does not feel ‘torn’ by conflict because they have their own system to utilize to make decisions. Literature often refers to this people as self-motivated, self-directed, and self-monitoring.

Full-range leadership

Ability to use the full range of leadership behaviors (transactional and transformational) and is what separates effective from ineffective leaders.

Idealized Influence	Leader provides vision for organization and followers; inspires a sense of mission and instills pride in the work. The leader gains trust, respect and confidence from the followers.
Imperial	See First Order.
Individual consideration	Leader gives personal attention to followers; coaches, advises and assists them, often assisting those followers who may be neglected to become valued in the organization.
Information	In- <i>form</i> -ation is new knowledge that is added to your current form of your mind – not sufficient for growth in humans.
Inspirational motivation	Leader communicates high expectations and uses symbols to focus the efforts of the organization and followers. The leader expresses the important purpose in simple ways, resulting in enthusiasm and optimism and assists followers in envisioning the possibilities.
Instrumental	See Second Order definition
Intellectual stimulation	Leader promotes the ability to look at old problems in new ways. Promotes intelligence and rationality around problem solving. Creativity is stimulated through careful consideration of the problem and

open-ness to viewing both the problem and solution in new ways – out of the box.

Inter-individual mind

See Fifth Order for definition.

Interpersonal

relationship dimension with in each Order of constructive-development.

Intrapersonal

self-concept dimension within each Order of constructive-development.

Laissez faire

Absence of leadership, positive or negative from Leader.

Lens

The focus on a particular experience, knowledge, or other information that allows one to take a perspective.

Life span

Period of time from birth to death for a person.

Management-by-exception

Active - Keeps an eye on follower performance and implements correction when standards not upheld.

Passive - occurs only when standards not upheld.

Meaning-making

The activity of how an individual makes sense of experiences, knowledge, relationships, and the self.

Modern mind

See Fourth Order definition.

Object	Things that are Object are those that one is aware of, can reflect upon, can tend to, take control of, internalize, and operate upon. Things that are Subject have <i>you</i> , while <i>you</i> have things that are Object . The more taken as Object in life, the more complex worldview because one can see and act upon more things.
Orders	Constructive-development changes will be referred to as Orders ² to signify the over 21 possible transitions within the five dimensions outlined in the theory. Literature utilizing constructive-development theory identifies Order as a dimensional quality level or Order rather than a strict sequence (as in the term stage or level).
Self-transformational	Achieved all involved in Fourth Order, but have learned there are limits to own inner system and limits to having a system. Less likely to see the world in dichotomies and polarities and see the various shades of gray.
Organization Stewardship	The degree that leaders coach an organization to make positive contributions to the greater community through outreach, programs and relationship development.

Persuasive mapping	Ability to lead others to see the future and prepare for the possibilities in a compelling and motivating manner.
Post-modern mind	See Fifth Order definition.
Second Order – Instrumental	Adolescents (age 7-10); some adults – discovers that feelings and beliefs exist over time and aware that others have beliefs and feelings that remain constant over time. A rule today is a rule tomorrow and pre-occupation with trying to figure out how to get past the rule if it impedes their way. Empathy not possible, though they know others have feelings and desires. At this Order are self-centered and see others as helpers or barriers to have own needs met.
Self	One's personality, experiences; self refers to the conscious, reflective personality of an individual which they are tied to, fused with or embedded in (Subject).
Self-authoring	See Fourth Order definition.
Self-transformational	See Fifth Order definition.
Servant leadership	Leader makes a conscious choice to serve others needs as the defined by others, with leader chief motive to serve first, then lead.
Socialized mind	See Third Order definition

Subject

Things that are **Subject** to someone can't be seen because they are part of the person and are experienced as unquestioned, as part of the self – taken for granted, taken for true or not taken at all. Something that's **Subject** *has* you (Kegan 1994). Example: The leader who believes all people are motivated in the same way – the way the leader is motivated. When followers failed to be motivated by the methods applied, the leader believes that the followers are the problem, after all the motivation method being utilized was such a great inspiration to get the job done (at least in the leader's eyes of what is motivating)! The leader's belief and experience in motivation are **Subject** to them. Not knowing there are different ways that people are motivated makes the leader powerless to change their style to meet the needs of the diversity of their work group (self).

Third Order – Socialized

Older adolescents and majority of adults – (also referred to as Traditional Mind) Developed the ability to subordinate their needs to include the needs of others. Their needs – Subject to them in Second Order, now Object. Ability to internalize feelings and emotions of others; are guided by institutions that are important to them (school, religion, political party). Able to think abstractly, self-reflective on own and others actions, and devoted to something greater than own needs. When there is conflict between important others – feel 'torn in two' and cannot make a decision. Self-

esteem not possible at this Order, as there is no 'self' outside of those around them, who define and make up who they are at this Order.

Transactional leadership

Leader contracts with follower for services or goods and once the transaction is complete, the two go separate ways.

Transformation

Beyond adding new information to current form of knowledge; trans-form-ation changes the 'container' –larger, more complex, able to deal with multiple perspectives; transforming occurs when someone changes not just the way they behave, the way they feel, but the way they know (not what they know the *way* they know).

Transformational Leadership

Leaders seek to elevate their followers to higher levels of morality and encourage growth.

Wisdom

Ability to see a bigger picture and making connections across the environment and organization in anticipation of future direction.

X(Y) Transition

Signs of Y Order attributes emerging – sign of beginning to look externally. **Example:** 2(3) - hold own perspective and perspective of another internally and derive own thinking or feeling as consequence of that point of view. Am now Subject to Third Order meaning-making.

X/Y Transition

Two full Orders operating at the same time as part of transition position; X - the early structure is predominant. **Example:** 4/5 - experience of how to stay open to reconstruction of one's theory, so can construct a better theory; cannot consult self or others about the system because cannot take them as an Object of reflection.

Y/X Transition

Two full Orders operating at the same time as part of transition; Y – the transitioning to Order predominates (Y ruling, signs of X still there) cannot slip back to X/Y. **Example:** 4/3 – experience a kind of violation when others make us responsible for their feelings.

Y(X) Transition

Structure Y fully dominating with X present but in latter part of Order as strong protest of meaning-making evidence by X structure. **Example:** 3(2) – able to bring inside the self and other perspective – creating capacity to consider two view points now less of a struggle than before, but struggle still present.

APPENDIX B

Summary of Hypotheses

Appendix B

*Summary of Hypothesis***Transactional Leadership and Order of Constructive-Development**

- Hypothesis 1a:** Leader's use of contingent reward will be highest when leaders are in transition between constructive-development Second to Third Order.
- Hypothesis 1b:** Leader's use of passive management-by-exception will be highest when leaders are in transition between constructive-development Second to Third Order.
- Hypothesis 1c:** Leader's use of active management-by-exception will be highest when leaders are in transition between constructive-development Second to Third Order.
- Hypothesis 1d:** Leader's use of laissez-faire will be highest when leaders are in transition between constructive-development Second to Third Order.

Transformational Leadership and Order of Constructive-Development

- Hypothesis 2a:** Leader's use of idealized influence will be highest when leaders are in transition between constructive-development Third to Fourth Order.
- Hypothesis 2b:** Leader's use of inspiration motivation will be highest when leaders are in transition between constructive-development Third to Fourth Order: 4/3.
- Hypothesis 2c:** Leader's use of individual consideration will be highest when leaders are in transition between constructive-development Third to Fourth Order:3/4.
- Hypothesis 2d:** Leader's use of intellectual stimulation will be highest when leaders are in transition between constructive-development Fourth to Fifth Order: 4/5.
- Hypothesis 2e:** Leader's use of charisma will be highest when leaders are in transition between constructive-development Third to Fourth Order: 4/3.

Servant Leadership and Order of Constructive-Development

- Hypothesis 3a:** Leader's use of organizational stewardship will be highest when leaders are in transition between constructive-development Third and Fourth Order: 4/3.
- Hypothesis 3b:** Leader's use of persuasive mapping will be highest when leaders are in transition between constructive-development Fourth and Fifth Order: 4/5.
- Hypothesis 3c:** Leader's use of altruistic calling will be highest when leaders are in transition between constructive-development Fourth and Fifth Order: 4/5.
- Hypothesis 3d:** Leader's use of emotional healing will be highest when leaders are in transition between constructive-development Fourth and Fifth Order: 4/5.
- Hypothesis 3e:** Leader's use of wisdom will be highest when leaders are in transition between constructive-development Fourth and Fifth Order 4/5.

APPENDIX C

Servant Leadership Questionnaire Self-Report

Appendix C

SERVANT LEADERSHIP QUESTIONNAIRE
Self – (Barbuto & Wheeler, 2006)

Name: _____

Please read each of the following statements and rate the frequency with which each is true:

Never	Rarely	Sometimes	Often	Always
0	1	2	3	4

- ___ 1. I put others' best interests ahead of my own
- ___ 2. I do everything I can to serve others
- ___ 3. I sacrifice my own interests to meet others' needs
- ___ 4. I go above and beyond the call of duty to meet others' needs
- ___ 5. I am someone that others turn to if they have a personal trauma
- ___ 6. I am good at helping others with their emotional issues
- ___ 7. I am talented at helping others to heal emotionally
- ___ 8. I am one that can help mend others' hard feelings
- ___ 9. I am alert to what's happening around me
- ___ 10. I am good at anticipating the consequences of decisions
- ___ 11. I have good awareness of what's going on around me
- ___ 12. I am in touch with what is happening around me
- ___ 13. I know what's going on in the organization
- ___ 14. I offer compelling reasons to get others to do things
- ___ 15. I encourage others to dream "big dreams" about the organization
- ___ 16. I am very persuasive
- ___ 17. I am good at convincing others to do things
- ___ 18. I am gifted when it comes to persuading others
- ___ 19. I believe that the organization needs to play a moral role in society
- ___ 20. I believe that our organization needs to function as a community
- ___ 21. I see the organization for its potential to contribute to society
- ___ 22. I encourage others to have a community spirit in the workplace
- ___ 23. I am preparing the organization to make a positive difference in the future

APPENDIX D

Servant Leadership Questionnaire Rater Report

Appendix D

SERVANT LEADERSHIP QUESTIONNAIRE

Rater – (Barbuto & Wheeler, 2006)

Name of Person You Are Rating: _____

This person is (circle one): My Supervisor Same Level My Subordinate Other

Please read each of the following statements and rate the frequency with which each is true:

Never	Rarely	Sometimes	Often	Always
0	1	2	3	4

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

APPENDIX E

Subject – Object Interview Protocol

APPENDIX E

Subject – Object Interview Protocol

**Subject-Object Interview
Interview Protocol for Telephone Interview**

You have agreed to participate in a tape-recorded interview for the purposes of a research study previously identified in a written letter or email to you.

The interview is about ways people make meaning of their own personal experience.

You understand you will be asked about ordinary experiences (like being moved, or being angry or conflicted about some decision, etc.)

You understand that you do not have to answer any questions you choose not to answer.

You understand that any excerpts taken from this interview, written or spoken, will disguise all names of persons, and places so as to preserve your anonymity and privacy.

You understand that although most people find these interviews engaging and interesting, should you feel like discontinuing the interview for any reasons we may do so at any time.

Thank you for your generosity in making time available for our learning.

Please complete the activity listed below as Preparation for Interview 20-30 minutes prior to the agreed interview time.

At your appointed time, call **1-800-XXX-XXX**
Conference Bridge number: XXXXXX

The interview on the telephone will take at least 60 minutes. At 60 minutes, we will determine if there is any thing that needs to be finished before we end.

Instructions for Preparation for Telephone Interview Subject-Object Interview

Goal of session:

How you think about things. How you make sense of your own experience.

You don't have to talk about anything that you don't want to talk about.

Tools:

Five 5"x7" index cards or ½ sheets of paper

Write the following word or phrase, one per card:

Angry

Success

Strong stand, conviction, Important to me

Torn

Change

PREPARATION FOR INTERVIEW

These cards are for your use only. You can do whatever you like with them after the interview. The cards are to help you jot down things we might want to talk about in the interview.

Spend 20-30 minutes prior to the interview call with the cards jotting down on the cards things that you choose to talk about. We do not have to talk about anything you don't want to talk about. The goal in the interview is to deeply understand what you are talking about.

Let's take the first card – ANGRY

If you were to think back over the last several weeks, even the last couple months, and you had to think about times you felt really angry about something, or times you got really made or felt a sense of outrage or violation-are there 2 or 3 things that come to mind? Take a minute to think about it, if you like, and just jot down on the card whatever you need to remind you of what they were.

Next card – STRONG STAND, CONVICTION, IMPORTANT

If you were to think of some time when you had to take a strong stand, or felt very keenly 'this is what I think should or should not be done about this,' times when you became aware of a particular conviction you held.... What is it that is most important to you?' or 'What do you care deepest about?' or 'What matters most?'

Next card – SUCCESS

If you were to think of some times when you felt kind of triumphant, or that you had achieved something that was difficult for you, or especially satisfying that you were afraid might come out another way, or a sense that you had overcome something...

Next card – TORN

Felt really in conflict about something, where someone or some part of you felt one way or was urging you on in one direction, and someone else or some other part was feeling another way; times when you really felt kind of torn about something...

Next card – CHANGE

As you look back on your past, if you had to think of some ways in which you think you've changed over the last few years—or, even months—if that seems right—are there some ways that come in mind?

Part II

At your appointed time, call **1-800-xxx-xxxx**

Conference Bridge number: xxxxxx

Modified from the Subject-Object Interview Protocol as found in

Lahey, L. L., Souvaine, E., Kegan, R., Goodman, R., & Felix, S. (1988). *A guide to the subject-object interview: Its administration and interpretation*. Unpublished manuscript, Cambridge, MA: The Subject-Object Research Group.

APPENDIX F

Subject-Object Interview Analysis Form

APPENDIX G

Subject-Object Interview Overall Formulation Form

Appendix G

SUBJECT-OBJECT ANALYSIS
Overall Formulation Sheet

Name of Code of Interview: _____ Analysis
 Page #: _____

A. Tentative Overall Hypothesis (minimum of 3 bits reflective of each hypothesis):

B. Rejected Tentative Hypothesis/Hypotheses and Reason(s) for Rejection:

1. Hypoth: _____ Why rejected?

2. Hypoth: _____ Why rejected?

C. SINGLE OVERALL SCORE (minimum of 3 bits reflective solely of this score)

(if interview not
 scorable with single score,
 enter range of scores*)

--

D. **Testing S.O.S.** If you have not already justified your rejection of scores on either “side” of the S.O.S, do so here:

E. **Interview “Power”** (# of bits solely reflective of S.O.S):

* If unable to formulate single score, explain what further information needed to reach single score.

APPENDIX H

Cover Letters to Participants

Appendix H
Letter 1

Recruitment Email – Leader Participant

You are invited to be a part of a research project with the purpose of examining possible relationships between the behaviors of leaders and their level of human development. You were selected to receive an invitation to participate because you are a member of <name of program> leadership program from the current and alumni members of the program.

Participation in the Part 1 of study will take approximately 30 minutes to complete assessment several assessments on your leadership behaviors with others. You will also be asked to provide names and contact information for individuals you believe would be able to rate your leadership behaviors. Part 2 of the study will require approximately 90 minutes of your time in an interview with the researcher. You will be asked about ordinary experiences (like feeling moved, or being angry or conflicted about some decision, etc.) and be introduced to the topics for the interview and be allowed to jot some notes or thoughts on paper prior to the actual taped interview.

You must be 19 years of age or given parental consent to participate in the program. There are no known risks or discomforts associated with this research. You may find the learning experience enjoyable and the information may be helpful to you when you in your participation in (name community leadership program) or in your volunteer and work life. The information gained from this study may help us better understand the effectiveness of leader behavior.

Any information obtained during this study will be kept strictly confidential. The information obtained in this study may be published in scientific journals or presented at scientific meetings but the data will be reported as aggregated data. There will be no compensation for participating in this research.

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigators, the University of Nebraska or (insert community leadership program name here). Your decision will not result in any loss or benefits to which you are otherwise entitled.

You are voluntarily making a decision whether or not to participate in this research study. Your signature on the enclosed informed consent certifies that you have decided to participate having read and understood the information presented. You will be given a copy of this consent form to keep.

Thank you in advance for your assistance in this study.

<name >Coordinator, <organization name>

Marilyn J. Bugenhagen, M.A., Principal Investigator

John E. Barbuto, Jr, Ph.D., Secondary Investigator

Office: (xxx) xxx-xxxx

Office: (414) xxx-xxxx

Office (402) xxx-xxxx

*Identification of Project: Antecedents of Servant and Transformational Leadership
IRB# 443*

Appendix H
Letter 2

Recruitment Letter – Raters of Leader Participants

You are invited to be a part of a research project with the purpose of examining possible relationships between the behaviors of leaders and their level of human development. Your name and contact information was forwarded to us by a leader who is participating in this study and they desire for you to provide feedback on their leadership behaviors. The leader <name> is a participant in the <name of program> leadership program.

Participation in the study will take approximately 30 minutes to complete assessment several assessments on your leadership behaviors with others. You will complete assessments consisting of 45 Likert-type questions and 23 Likert type questions, rating the leadership behaviors of the leader identified on the form. At the end of completion of the assessments (on-line), you will submit them to the researcher (on-line via the internet). Submitting assessments on line will be through a secured and encrypted server.

You must be 19 years of age or given parental consent to participate in the program. There are no known risks or discomforts associated with this research. The information gained from this study may help us better understand the effectiveness of leader behavior.

Any information obtained during this study will be kept strictly confidential. The information obtained in this study may be published in scientific journals or presented at scientific meetings but the data will be reported as aggregated data. There will be no compensation for participating in this research.

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigators, the University of Nebraska or (insert community leadership program name here). Your decision will not result in any loss or benefits to which you are otherwise entitled.

You are voluntarily making a decision whether or not to participate in this research study. Your signature on the enclosed informed consent certifies that you have decided to participate having read and understood the information presented. You will be given a copy of this consent form to keep.

Thank you in advance for your assistance in this study.

Marilyn J. Bugenhagen, M.A., Principal Investigator

Office: (414) xxx-xxxx

John E. Barbuto, Jr, Ph.D., Secondary Investigator

Office (402) xxx-xxxx

*Identification of Project: Antecedents of Servant and Transformational Leadership
IRB#443*

Appendix H
Letter 3
Sample Email Confirmation

Thank you for agreeing to be part of a research project to assist the in enhancing the development leaders through <name of organization.> This study will look at the behaviors of leaders and provide feedback to you for your professional and personal development.

Part 1 will require approximately 80-90 minute block of time including 15-20 minutes of preparation before the 60 minute interview with the researcher on the telephone. You will be asked about ordinary experiences (like feeling moved, or being angry or conflicted about some decision, etc.) You introduced to the topics for the interview and be allowed to jot some notes or thoughts on paper prior to the actual taped interview. A toll-free number will be provided to do the interview. See the times below and select 2 or 3 times that work for you and email those back to me. I'll contact you within a day to confirm a time.

Part 2a of study will take approximately 20 minutes to complete assessment several assessments on your leadership behaviors with others on a survey system called SURVEY MONKEY. You will need your leader ID and password to access (see link and information below). You will also have 3-5 others who will rate you on a survey in the Survey Monkey system as well. I have prepared an email for you to forward to them with the informed consent to ask them to rate you. All of your raters will use the same rater ID#. (watch for that email).

Part 2b of the study will require approximately 15 minutes to complete a short assessments on your leadership behaviors with others on a survey system called MIND GARDEN – using the Multifactor Leadership Questionnaire. Watch for this email for this survey. You will be adding the names and email addresses on this site of people you desire to give you feedback on your leadership behaviors and you will be sending them an email through that system to invite their participation.

Please see the attached informed consent which outlines other information about the confidentiality of your information and may answer additional questions you may have about this study. You will be asked to confirm you acceptance of participating in this study with the first survey system: Survey Monkey.

Survey Monkey information:

Weblink: <http://www.surveymonkey.com/s.asp?u=<xxxxxxxxxxxxxx>>

Leader ID: xxxxx

Password: Leadership

Please let me know if you have any questions. I look forward to involving you in this project!

Marilyn Bugenhagen, Principal Investigator, IRB #443, University of Nebraska - Lincoln

Times available (you'll need at least 20 minutes BEFORE this time for preparation)

APPENDIX I

Informed Consent for Participants

Appendix I Informed Consent for Leaders



INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
DEPARTMENT OF AGRICULTURAL LEADERSHIP,
EDUCATION AND COMMUNICATION

INFORMED CONSENT FORM - Leader

TRF# 443

Identification of Project:

Antecedents of Servant and Transformational Leadership

Purpose of the Research:

This study is a research project with the purpose of examining possible relationships between the behaviors of leaders and their level of human development. You are invited to participate because you are a participant of a leadership or educational program. You must be 19 years of age or given parental consent (separate form) to participate in the program.

There are two parts of this study for Leaders.

Participation in the Part One will take approximately 30 minutes to complete leadership assessment portion of the study.

Participation in the Part Two of study will take approximately 90 minutes to complete an audio-taped interview with the researcher.

Procedures:

Part 1:

Participation in this study will require approximately 30 minutes of your time. You will complete two assessments via a secured server on the Internet, one consisting of 45 Likert-type questions and one 23 Likert-type questions. Additionally, some basic demographic data will be obtained prior to beginning the assessments. At the end of completion of the assessments, you will submit them to the researcher on line via the internet through a secured and encrypted server.

Part 2:

Participation in Part 2 will require approximately 90 minutes of your time. In a personal and confidential interview, the researcher will ask you about ordinary experiences (like feeling moved, or being angry or conflicted about some decision, etc.) In preparation for the interview, you will be introduced to the topics for the interview and be allowed to jot some notes or thoughts on paper prior to the actual taped interview. After about 20-30 minutes of this preparation, the researcher will begin the interview with your consent.

Risks and/or Discomforts:

There are no known risks or discomforts associated with this research. In the event of problems resulting from participation in the study, psychological treatment should be sought through your university or college counseling or health center.

Benefits:

You may find the learning experience enjoyable and the information may be helpful to you when you in your participation in your volunteer and work life. The information gained from this study (Part 1 and 2) may help us to better understand the effectiveness of relationship between leader behavior and stage of human development.

Confidentiality:

Any information obtained during this study which could identify you will be kept strictly confidential. The data will be stored in a locked cabinet in the investigator's office or a secured server and will only be seen by the investigator during the study and for three years after the study is complete. The information obtained in this study may be published in scientific journals or presented at scientific meetings but the data will be reported as aggregated data. The audiotapes will be erased after transcription.

Compensation:

There will be no compensation for participating in this research.

Opportunity to Ask Questions:

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. Or you may call the investigator at any time, office phone, (414) 254-5988, or after hours (262) 781-6747. If you have questions concerning your rights as a research subject that have not been answered by the investigator or to report any concerns about the study, you may contact the University of Nebraska-Lincoln Institutional Review Board, telephone (402) 472-6965.

Freedom to Withdraw:

You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigators, the University of Nebraska or any of your affiliations with your organization or educational institution. Your decision will not result in any loss or benefits to which you are otherwise entitled.

Consent, Right to Receive a Copy:

You are voluntarily making a decision whether or not to participate in this research study. Your signature certifies that you have decided to participate having read and understood the information presented. You will be given a copy of this consent form to keep.

..... Check if you agree to be audio taped during the interview.

Signature of Participant:

Signature of Research Participant

Date

Name and Phone number of Investigator(s)

Marilyn J. Bugenhagen, M.A., Principal Investigator
John E. Barbato, Jr, Ph.D., Secondary Investigator

Office: (414) 254-5988
Office (402) 472-8736

Appendix I Informed Consent for Raters



INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
DEPARTMENT OF AGRICULTURAL LEADERSHIP,
EDUCATION AND COMMUNICATION

INFORMED CONSENT FORM

IRB# 443

Identification of Project:

Antecedents of Servant and Transformational Leadership

Purpose of the Research:

This study is a research project with the purpose of examining possible relationships between the behaviors of leaders and their level of human development. Participation in this of study will take approximately 30 minutes to complete. You must be 19 years of age or given parental consent (separate form) to participate in the program.

The leader, from a leadership or other educational program, has agreed to participate in this study supplied your name as an individual they desire to provide assessment feedback on their leadership behaviors. Your name was submitted by a leader in this study as someone who could rate their leadership behaviors. The leader was identified to you in either a letter or email correspondence and provided the researcher with your contact information.

Procedures:

Participation in this study will require approximately 30 minutes of your time. You will complete assessments consisting of 45 Likert-type questions and 23 Likert type questions assessing the Leader's behavior. At the end of completion of the assessments you will submit your answers to the researcher on-line via the internet. Submitting assessments on line will be through a secured and encrypted server.

Risks and/or Discomforts:

There are no known risks or discomforts associated with this research. You are free to withdraw at any time from this study. In the event of problems resulting from participation in the study, psychological treatment is available on a sliding fee scale through a referral from the principal investigator who can be contacted at (414) 254-5988.

Benefits:

There are no direct benefits offered for participation in this study.

Confidentiality:

Any information obtained during this study which could identify you will be kept strictly confidential. The data will be stored in a locked cabinet in the investigator's office or a secure server and will only be seen by the investigator during the study and for five years after the study is complete. The information obtained in this study may be published in scientific journals or presented at scientific meetings but the data will be reported as aggregated data. The audiotapes will be erased after transcription.

Compensation:

There will be no compensation for participating in this research.

Opportunity to Ask Questions:

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. Or you may call the investigator at any time, office phone, (414) 254-5988, or after hours (262) 781-6747. If you have questions concerning your rights as a research subject that have not been answered by the investigator or to report any concerns about the study, you may contact the University of Nebraska-Lincoln Institutional Review Board, telephone (402) 472-6965.

Freedom to Withdraw:

You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigators, the University of Nebraska. Your decision will not result in any loss or benefits to which you are otherwise entitled.

Consent, Right to Receive a Copy:

You are voluntarily making a decision whether or not to participate in this research study. Your check off in the box in the web survey on Survey Monkey certifies that you have decided to participate having read and understood the information presented. You were emailed a copy of this consent form to keep.

Name and Phone number of Investigator(s)

Marilyn J. Bugenhogen, M.A., Principal Investigator
John E. Barbuto, Jr., Ph.D., Secondary Investigator

Office: (414) 254 5988
Office (402) 472-8736

APPENDIX J

Institutional Review Board Approval of Study Letter

Appendix J
Institutional Review Board Approval of Study Letter



HUMAN RESEARCH PROTECTIONS
Institutional Review Board

July 5, 2006

Marilyn Eagenhagen
Dr. John Barbuta
18210 Bristol Lane
Brookfield WI 53045

IRB # 2006-06-443 EP

TITLE OF PROJECT: Antecedents of Servant and Transformational Leadership: A Constructive Development Approach

Dear Marilyn:

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 Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study. Your proposal seems to be in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46).

Date of IR Review: 06/19/06.

You are authorized to implement this study as of the Date of Final Approval: 07/25/06. This approval is Valid Until: 07/4/07.

1. Enclosed are the IRB approved Consent forms for this project. Please use these forms when making copies to distribute to your participants. If it is necessary to create a new informed consent form, please send us your original so that we may approve and stamp it before it is distributed to participants.

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:

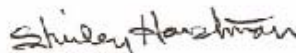
- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or 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 Shirley Horstman, IRB Administrator, at 472-9417 or email shorstman1@unl.edu.

Sincerely,


Dan R. Hoyt, Chair
for the IRB


Shirley Horstman
IRB Administrator

cc, Faculty Advisor