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THE ROLE OF *BROADEN-AND-BUILD SCHEMA* AND EMPLOYEE MOTIVATION IN THE RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP AND SUBORDINATE OUTCOMES

A Thesis

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

in

Psychology:

Industrial/Organizational

---

by

Colby Jacob Hilken

June 2017

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June 2017

Approved by:

Dr. Janelle Gilbert, Committee Chair, Psychology

Dr. Kenneth Shultz, Committee Member

Dr. Janet Kottke, Committee Member

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ABSTRACT

The purpose of this study was twofold in that it explored the relationships in which transformational and transactional leadership impact particular subordinate outcomes such as job satisfaction and organizational commitment. Secondly, once transformational leadership was tested and shown to be a better predictor of both job satisfaction and organizational commitment when compared to transactional leadership, employee motivation and one's *broaden-and-build schema,* building off of concepts from the Broaden-and-Build theory, were proposed as mediators of the relationship between transformational leaders and their subordinate's outcomes in terms of job satisfaction and organizational commitment. Transformational leadership is a strong predictor of many subordinate outcomes, but the goal of this study was to better understand the "why" in the relationship between transformational leadership and employee outcomes. After pilot testing the *Broaden-And-Build Schema* Questionnaire, a cross-sectional sample of employees were surveyed to assess the mediation of *broaden-and-build schema* and employee motivation on the relationship between transformational leadership and subordinate outcomes, job satisfaction and organizational commitment.

Participants (N = 390) responded to a survey consisting of four scales previously developed and one scale developed specifically for this study. Examining seven different hypotheses, regression analysis and SEM models were utilized to analyze the data. Regression analyses was used to analyze

hypotheses 1 through 3 and it was found that transformational leadership predicted both subordinate outcomes and the mediating variables better than transactional leadership. Mediation analyses was used to analyze hypotheses 4 through 7 and it was found that while the mediations were positive, the proposed mediators did not significantly mediate the relationships.

This study strived to reiterate the importance of transformational leaders and help to give direction to leaders as to what focus is important when job satisfaction and organizational commitment are the desired outcomes. These findings add to the extensive research on transformational leaders and their subordinate outcomes.

Keywords: Transformational Leadership, Transactional Leadership, Job Satisfaction, Organizational Commitment, Broaden and Build, Motivation

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CHAPTER ONE

INTRODUCTION

Leaders are not organizational members that companies or employees should take for granted. Through the use of motivation, mentoring, and understanding the strengths and weaknesses of their followers, leaders can provide a unique way of enhancing an employee's performance, commitment, and satisfaction within their job. While there is no such thing as a "quick fix" to complex and challenging problems, positive psychology, with its forward-looking orientation, suggests that there is potential for a more productive and efficient workforce that may be struggling to find its way through difficult problems (Froman, 2010). In a world of economic stress and uncertainty, organizations have turned to the principles of positive psychology and have given great importance to the idea that organizations need to develop virtue and cultures centered on morality and integrity (Froman, 2010). A goal of positive psychology is to promote the positive experiences and emotions of the people within the company (Christopher, Richardson, & Slife, 2008). This goal can be achieved through a type of leadership known as transformational leadership.

Transformational leaders, at their core, incorporate many of the principles derived from positive psychology. Transformational leaders inspire and motivate their employees, call people to action, and make others want to change and become an overall better employee in every aspect of work (Koppes-Bryan,

Smith, & Vodanovich, 2012). When the right types of leaders are in the proper positions, employees can improve their productivity and efficiency. The leaders who tend to take a transformational leadership standpoint do so by using motivational, influential, and individualized consideration tactics. Transformational leaders engage followers to motivate them and satisfy their intrinsic needs through articulating an inspiring vision for the future (Schmit & Strange, 2010). Transformational leaders motivate their followers to perform beyond what is expected of them (Breevaart, Bakkar, Hetland, Demerouti, Olsen, & Espevikm, 2014). In the workplace, there are typically two different types of leaders: transformational leaders and transactional leaders. In contrast to the transformational leader, transactional leaders usually explore the reward and punishment side of managing in order to gain follower compliance (Schmit & Strange, 2010). Leaders tend to use both transactional and transformational leader tactics, but the most effective leaders use transformational leadership tactics more frequently (Breevaart et al., 2014). So what can transformational leaders actually do in the workplace?

Definition of the Problem

There have been many studies showing that transformational leaders contribute to higher job satisfaction, overall job commitment and loyalty for their employees (Avolio & Gardner, 2005; Chi, Chung, & Tsai, 2011; Koppes-Bryan et al., 2012; Schmit & Strange, 2010). Based on the research done, there does

seem to be something about transformational leaders that leads to these desired outcomes, but there does not seem to be a thread connecting the two variables. Until now, researchers have been okay with the fact that transformational leaders provide these outcomes, but it is time to find out *why* these outcomes are being achieved.

Purpose of the Study

What is it about transformational leaders that leads to higher job satisfaction and organizational commitment among their followers? Too often, researchers will be satisfied with the A→B result, look at the correlations and report the findings, but this study will examine that relationship with the added benefit of digging deeper into the *why* and the *how* behind that relationship. In this particular study, two mediators were analyzed to examine the relationship between transformational leaders and subordinate outcomes.

This study has the added benefit of introducing a new variable into the social sciences field, an employee's *broaden-and-build schema.* This study demonstrates that if an employee's cognitive repertoire is broadened and then built upon and they are motivated intrinsically by their transformational leader, the subordinates will be more committed to their organization and will have a stronger sense of satisfaction in their current job. So, what is it about transformational leaders that leads followers to produce better results?

As previously stated, there is a correlation between transformational leaders and these subordinate outcomes, but the next question that is usually posed is “why does this relationship exist and what is it that makes this relationship work on a continual basis?” The purpose of this research was to find out new ways in which to more thoroughly understand this dynamic relationship.

Research Questions

Stemming from the introduction of this research, a couple of initial questions that will be answered in the later chapters of this research were posed to help navigate the research and the analysis:

1) Do transformational leaders provide stronger results in terms of subordinate outcomes when compared to transactional leaders?
2) If so, what qualities about a transformational leader lead us to believe that subordinates will provide better results with a transformational leader?
3) What do transformational leaders provide for their employees that transactional leaders do not provide?
4) Why do transformational leaders provide better results?

Operational Definitions

Transformational leadership is made up of four key components: intellectual stimulation, individualized consideration, inspirational motivation, and

idealized influence (Bass & Avolio, 1990). Transformational leadership encourages creativity, open and honest communication, and vision, as well as acting as a trustworthy and respected individual in the office (Bass & Avolio, 1990).

Transactional leaders are defined as leaders who identify the needs of their followers and engage in exchange relationships with them based on objectives that are to be met (Hargis, Watt, & Pitrowski, 2011). Essentially, transactional leaders perform a metaphorical transaction with their employees: money, rewards, recognition in exchange for work. The opposite may also be true of transactional leaders: persecution, ridicule, and humiliation in front of other employees when performance is poor.

Broaden-and-build schema is a new term developed from concepts of the Broaden-and-Build theory from the work of Barbara Frederickson (2001). *Broaden-and-build schema* is a representative term for someone who desires to have a wide range of ideas, thoughts, and concepts, and then continues to build upon those initial concepts. *Broaden-and-build schema* is defined, in part, based on an individual's creativity and their desire to learn and grow from their ideas.

Significance of the Study

The purpose of this study was twofold in that it was intended to once again show the strong correlation between transformational leadership and important subordinate outcomes However, we also introduced a new variable into the field

of study, *broaden-and-build schema.* While other variables representative of one's *broaden-and-build schema* have been around for decades, this is the first variable in the field that encompasses two different aspects of one component.

This new variable also serves as a tool for future researchers to use in similar studies. In a world where people are constantly adapting and the working world is constantly changing, it is important to develop new tools that coincide with the changes. The desire to move towards a more mentor/mentee relationship in the workplace between leaders and their subordinates will mean that more studies need to be done to examine those relationships to find what is working and what is not working.

Summary

This study was conducted in two parts, the pilot study and the main study. This research is presented in five parts, beginning with Chapter I, which introduces the study, defines the key definitions, and summarizes what the study will be about. Chapter II provides an overview of the relevant literature associated with the variables used in this study, how they are used and defined. Chapter III details the research design methods including the instrumentation and participants used for the study within the survey. Chapter IV provides analysis of the findings in scientific form in order to show correlations and mediations. Chapter V gives a summary of the findings and explains the results. Chapter V

also includes recommendations for action, reflections of the researcher, limitations, and a conclusion of the study.

CHAPTER TWO

REVIEW OF THE LITERATURE

Leadership Types

Transformational leaders provide support for employees in their various positions within the company. They mentor, support, and care for their employees, which will add value to the subordinate's work (Koppes-Bryan et al., 2012). Leaders need to be aware of their style so that these leaders can tailor-make their leadership based on their subordinates' strengths and weaknesses (Erkultu, 2008). There are many different kinds of leadership, but in the corporate world, there are typically two types of leaders that tend to present themselves: transformational and transactional leaders. The differences between the two leaders will shed light on the reasons why these specific outcomes from each type of leadership tend to show through in the attitudes and performance of their employees.

Transformational Leadership

Transformational leaders possess vision and charisma, have the ability to inspire, and show consideration of individual differences (Koppes-Bryan et al., 2012). So often in the work world, it can seem like subordinates can take on the role of drones, but transformational leaders take them out of that and use individual consideration to ensure everyone directly underneath them is cared for. Two excellent examples of transformational leadership are Dr. Martin Luther

King Jr. and Abraham Lincoln (Ryan, 2011). These two leaders shifted an entire culture through their interpretation of ideas and their use of transformational leadership principles in order to effectively transform and motivate change throughout the world (Ryan, 2011).

Transformational leadership is composed of four dimensions: idealized influence, inspirational motivation, intellectual stimulation and individualized consideration (Arnold, Barling, Kelloway, McKee, & Turner, 2007). *Idealized influence* occurs when the leader does the "right thing" and uses ethics and morals to gain the trust of the follower (Arnold et al., 2007). Within the transformational leadership role, leaders put their own needs behind the needs of others (Ryan, 2011). *Inspirationally motivating* leaders hold high expectations and encourage followers to achieve more than they thought was possible for their capabilities (Arnold et al., 2007). In this approach, the leader makes employees more emotionally invested in their work, so that they will feel more motivation from intrinsic reasons for doing their work (Ryan, 2011). *Intellectual stimulation* involves encouraging followers to challenge the norm and to answer their own questions (Arnold et al., 2007). *Intellectual stimulation* gives the leader the opportunity to make use of the incumbent's creativity (Ryan, 2011). If the leader constantly answers the questions and gives solutions to employees, then employees have no reason to think for themselves, and therefore will not develop solution skills (Ryan, 2011). Finally, *individual consideration* pertains to respecting the employee, coaching the employee, and demonstrating

appreciation for the employee (Arnold et al., 2007). Overall, transformational leaders have a certain level of respect and caring for the individual because they attend to individual needs, which engages and empowers followers (Koppes-Bryan et al., 2012).

Researchers conclude that transformational leadership is positively correlated with a plethora of positive employee attitudes (Koppes-Bryan et al., 2012). Transformational leaders tend to believe in what they are changing. They act and react out of their own attitudes and ways of thinking so that they can be fully engaged in what they are doing. Arnold et al. (2007) state that transformational leaders go beyond worthless exchange relationships and motivate others to achieve more than they thought was possible.

Transformational leaders display a certain confidence and determination that radiates and will create positive, self-efficacious feelings among the transformational leader's group of employees (Chi et al., 2011). Leaders who experience positive moods are also more likely to engage in prosocial behaviors, such as helping their fellow team members, providing necessary support or assisting with personal matters (Chi et al., 2011). Koppes-Bryan et al. (2012) found that transformational leaders are leaders who show such positive behaviors that they inspire their employees to obtain higher levels of performance in order to achieve organizational goals. If people put themselves in the shoes of a transformational leader, they would see how much potential everything has, instead of the possible downfalls from trying out something new.

Whether intentional or unintentional, the leader exudes a certain kind of confidence and positivity that the employee tends to grab a hold of. There is something about the actions, reactions, and personality of the transformational leader that changes the employee's outlook on their job and shapes the way that the employee feels about what they do at work. The actions and attitudes of those in positions of authority affect the actions and attitudes of their employees (Erkutlu, 2008). Transformational leaders attend to individual needs, which engage and empower their followers (Koppes-Bryan et al., 2012). Inspiration and motivation play a key role in getting the employee to complete tasks and focus on their role and abilities within the work context. Transformational leaders elevate the level of maturity and ideals from the follower as well as the employees' concerns for achievement (Erkutlu, 2008). When leaders show support and understanding for their subordinates, followers are more likely to be interested and focused on their tasks (Erkutlu, 2008).

Transactional Leadership

Transactional leaders are defined as leaders who identify the needs of their followers and engage in exchange relationships with them based on objectives that are to be met (Hargis, Watt, & Pitrowski, 2011). Followers of transactional leaders perform according to the will and direction of their leader and transactional leaders will reward or punish those efforts or lack thereof (Riaz & Haider, 2010). They use punishment and reward systems to influence their employees (Chi, Chung, & Tsai, 2011). In the transactional leadership realm,

social exchange theory is used most often between the leaders and their followers. Social exchange theory is the maximization of benefits and the minimization of costs to a person (Emerson, 1976). Social exchange theory is based around the idea of "What can I get out of this person and what do I have to do to obtain it?" For example, Emerson (1976) identified that when individuals receive economic and socioemotional resources from their organization, they feel the need to repay the organization. This transaction describes engagement as a two-way relationship between the employer and the subordinate (Emerson, 1976). The way in which a subordinate repays their organization is through their level of engagement (Emerson, 1976). The more highly engaged the employee is in their work, the better the subordinate's cognitive, emotional, and physical resources are predicted in their ability to carry out their job functions (Emerson, 1976). When the organization fails to provide the resources listed above, employees show less commitment and disengage from their job and their role in the organization (Emerson, 1976).

The four core components of transactional leadership are contingent rewards, active management by exception, passive management by exception, and laissez-faire (Riaz & Haider, 2010). The transactional leader's most effective tool is the contingent reward (Breevaart et al, 2014). *Contingent rewards* are the process by which followers receive incentives after they accomplish certain tasks to stimulate their own motivation (Breevaart et al., 2014). *Active management by exception* means that the leader is continually looking at the employee's

performance and makes changes based on errors along the way (Bass, 2008). In the *passive management by exception* component, a leader waits for issues to arise before fixing any problems (Bass, 2008). *Laissez-faire* refers to when leaders provide an environment where the subordinates get many opportunities to make their own decisions (Bass, 2008). The leader usually relinquishes responsibility to the subordinates and avoids making decisions which usually results in the lack of direction in the group of subordinates (Bass, 2008). Punishments are most often used in these relationships and rewards and recognition will only come from supervisors for above and beyond type of work for the company (Schmit & Strange, 2010).

With the exception of laissez-faire leadership within transactional leadership, transactional leaders tend to restrict the employees' development of innovative and creative skills and hinder personal and organizational growth (Dai, Dai, Chen, & Wu, 2013). Even though transactional leaders seem to hinder creativity and innovation, Breevaart et al. (2014) report that transactional leaders tend to produce more committed and loyal followers than other leaders, such as transformational or authentic leaders. This type of reaction can be seen in authoritarian leader's followers as well. For example, Kim Jong-il delivered his orders in a way that his followers were loyal to him, but they would not necessarily look at him as a mentor or someone who would support them in times of their own need. Transactional leadership encourages followers to carry out their work in terms of strategic means that stresses rules, responsibilities,

expectations, avoiding errors, and a concrete, short-term plan (Hamstra, Yperen, Wisee, & Sassenberg, 2011). In short, transactional leaders may be seen as encouraging their followers to carry out their work in prevention-focused manner. This type of leadership may prove helpful for employees who prefer to use prevention means of self-regulation (Hamstra et al., 2011). Transactional leadership behaviors facilitate improving and extending existing knowledge and are associated with "exploitative innovation," which is a strategy that builds on improvements and refinements of current skills and processes (Riaz & Haider, 2010).

Leadership Summary

Transformational leadership goes beyond these "exchange" relationships and dives deeper to understand the worker and their motives. Transactional leadership tends to portray an A→B relationship; what is the goal and how do we get there. Transformational leadership tends to portray an A→B→C relationship with one or multiple variables from the employee in the middle representing such things as motivation or drive. The variable represented by the letter "B" are the constructs that transformational leadership contributes in order to lead to more enhanced outcomes for their employees and organizations.

Transactional and transformational leadership are active processes of leadership as portrayed in the workplace and literature (Sarwat, Hayat, Qureshi, & Ali, 2011). Both transformational and transactional leadership styles aid in predicting different specific subordinate outcomes in their jobs and with their

leader (Riaz & Haider, 2010). Dai et al. (2013) report that transformational leaders may be more effective than transactional leaders in motivating their employees to obey their supervisors and work harder for the company. It is easy to see that there are benefits to both styles, but it is necessary to find out what parts of each style of leadership work best on a regular basis.

Subordinate Outcomes

Based on the connections made in the transformational leadership literature, the desired outcomes of this study are an enhanced job satisfaction and organizational commitment. When these two outcomes are obtained, employee morale tends to be higher and performance on the job by subordinates tends to be higher as well (Avolio & Gardner, 2005; Chi, Chung, & Tsai, 2011; Koppes-Bryan et al., 2012; Schmit & Strange, 2010).

Job satisfaction and organizational commitment are two important variables for subordinates in organizations. When employees are satisfied and committed to their company, they tend to perform better and maintain a higher level of efficiency (Alvarez-Bejarano, Rodriguez-Carvajal, Moreno-Jimenez, Rivas-Hermosilla, & Sanz-Vergel, 2010). Employees tend to make a difference at work if they are properly motivated by either their supervisor or their environment, but most of the time employees tend to get direct motivation from their immediate supervisor. Leaders tend to enhance their employee's motivation and positive energy through encouragement and one-on-one

coaching (Breevaart et al., 2014). If employees feel as if they are making a difference at work, then they are more likely to be satisfied with what they are doing and stand behind their company instead of looking for the easiest tasks to complete (Alvarez-Bejarano et al., 2010).

Job Satisfaction

Emphasis on job satisfaction has been given a top priority for organizations since 1935 (Vroom, 1964). Hoy and Miskel (1987) viewed job satisfaction as a key to efficiency in an organization, while Conley (1989) saw job satisfaction as a component of the work environment that drives the climate of the organization. Job satisfaction coincides with an employee's effectiveness within an organization, while also allowing the organization to determine how effective their leaders are within the organization (Yukl, 2010). Long (1992) suggests that job satisfaction will have a positive effect on employee behavior, which in turn will make the organization look better as well. Transformational leadership and job satisfaction are connected because they both stimulate employees to perform beyond what they thought possible while recognizing the change that they can potentially bring to the company (Yukl, 2010).

Job satisfaction depends on many different facets within the workplace ranging from the environment to the supervisor. The employee typically does their best work when they are satisfied and then only the required minimum amount of work when they are dissatisfied. Leaders want their employees to be satisfied because it leads to better organizational performance overall (Sarwat et

al., 2011). A great supervisor who truly cares about their employees and wants them to succeed for all types of purposes is considered a rarity in organizations (Sarwat et al., 2011). Komala and Ganesh (2007) said that job satisfaction is one of the most significant issues that managers must face and whether or not it is identified as a priority, job satisfaction has shown to have a large impact on the organization.

Organizational Commitment

Organizational commitment is defined as the participation and classification of an employee with an institute (Sarwat et al., 2011). People with higher organizational commitment tend to be involved in more extracurricular role behavior than those with lower organizational commitment (Sarwat et al., 2011). Extracurricular role behaviors are items or tasks that an employee will do that is outside of their assigned role so that they can help the organization when needed. Mowday, Steers, and Porter (1979) define commitment as "the relative strength of an individual's identification with and involvement in a particular organization" (p. 226). In a separate article published prior to the preceding article, Porter, Steers, Mowday, and Boulian (1974) asserted that organizational commitment consisted of three core dimensions: "a strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the organizations, and a definite desire to maintain membership in the organization" (p. 604). The assumption is that a person will begin to identify as a crucial part of the organization and grow an

identity based on their role. Organizational commitment is one of the most researched variables in the organizational psychology field because it is assumed that this commitment directly affects the behavior of employees and therefore affects their contributions to the organizations (Rylander, 2003). There are three types of commitment: affective, normative, and continuance (Franke & Felfe, 2011). Affective commitment is the desire to remain with the company, normative commitment deals with moral obligations, and continuance commitment is associated with the rational cost-benefit considerations (Franke & Felfe, 2011). Affective and normative commitment tend to be the most common types of commitment, but for research sake, this proposal will mostly deal with the affective commitment component of the definition.

In relation to the affective disposition of the commitment realm, employees who display affective tendencies tend to stay with the company for a longer period of time (Meyer & Allen, 1997). Organizational commitment also leads to outcomes related to improved relationships and performance, and a reduction in turnover or intent to leave (Rylander, 2003). In a study conducted by Lambert, Hogan, and Jiang (2008), they found that staff commitment is at the core of an organization's success or failure and they argued that committed workers put forth extra effort to be successful in an organizational setting.

These two outcomes have interconnectivity within the two of them due to the fact that satisfaction is derived from commitment and commitment is derived from satisfaction. When an employee is committed to their organization, they

tend to be more satisfied with where they are professionally and when an employee is more satisfied with an organization, that employee tends to be more committed to that organization.

Hypothesis 1: Transformational leadership will be a stronger predictor of both job satisfaction and organizational commitment when compared to transactional leadership.

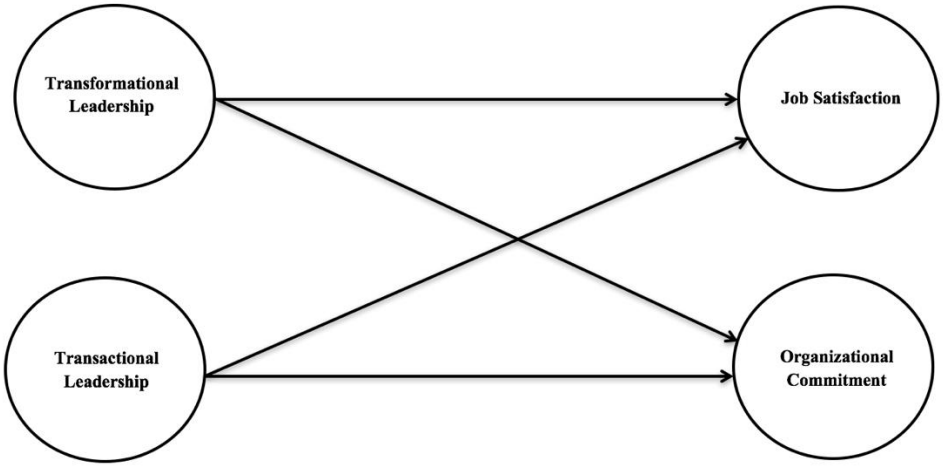


Figure 1. Model of the hypothesized relationships among transformational and transactional leadership and the desired outcomes, job satisfaction and organizational commitment.

Proposed Mediators

As previously noted, there are countless studies that point to the idea that transformational leadership leads to many positive outcomes for both the employees and the organizations (Avolio & Gardner, 2005; Chi, Chung, & Tsai, 2011; Koppes-Bryan et al., 2012; Schmit & Strange, 2010;). Transformational

leadership is still a relatively new concept in the organizational realm, so the pressing question is no longer “if it works,” but “how it works.” Using concepts from the Broaden-and-Build theory, one’s *broaden-and-build schema* and an employee’s motivation to succeed in their organization will be assessed to determine whether the expansion of ideas brought on by the transformational leader is contributing to the desirable results put out by previous research.

Review of Broaden-and Build Theory

The reasons that transformational leaders do so well in shaping their subordinate’s work habits and moral values is that they ignite a passion and desire to perform well in their work. An important term that will be addressed in this study is Broaden-and-Build theory and it is the idea that eventually transformational leaders can train and teach their subordinates to be self-sufficient (Frederickson, 2013). Idea generation and confidence in one’s own self-esteem and abilities are a couple key characteristics of a self-sufficient worker. Idea generation and self-sufficiency lead to creative problem solving through the activation of enhanced cognitive repertoires. Social cognitive theory uses self-regulatory components which combines affect and cognition pieces (Iles, Judge, & Wagner, 2006). Self-regulation theory is about enhancing upon one’s self (Iles, Judge, & Wagner, 2006). The Broaden-and-Build theory takes this concept a step further by stating that social and cognitive processes broaden the array of thoughts, actions, and percepts that spontaneously come to mind and then build upon those broadened processes by making a subordinate more

resourceful, more socially connected, and more likely to function at optimal levels (Frederickson, 2013).

Frederickson (2013) describes a process in which transformational leaders tend to align themselves with something that both broadens an employees' repertoire and creativity and then continues to build upon that broadened knowledge using their newly enhanced knowledge. Frederickson coined the term "broaden-and-build" to represent this exact process that transformational leaders have deemed an appropriate way to expand their employees' knowledge and efforts. The Broaden-and-Build theory suggests that positive emotions broaden one's awareness and encourage creative, new, and exploratory thoughts and actions (Frederickson, 2001). This broadened behavioral and thought repertoire builds skills and resources to help the person build upon this newly obtained knowledge (Frederickson, 2013). These same emotions that help one to broaden and build also end up producing a repertoire that is broader, which, in turn, leads to increased creativity, resilience, and efficiency (Frederickson, 2001). The Broaden-and-Build theory has been applied within organizations gearing towards a more creative workplace that fosters innovative ways to build more sustainable business practices that promote workers' health and inspire their productivity (Frederickson, 2013). In fact, in participating in the broaden-and-build principles, an employee is also helping to undo negative emotions that linger, which, in turn, causes more productivity (Frederickson, 2001).

Broaden-and-Build Schema

Using concepts from the Broaden-and-Build theory of positive emotions, an enhanced *broaden-and-build schema* would be representative of one's desire to have a wide range of ideas, thoughts, and concepts and then continue to build upon them, constantly improving as time moves forward. A person's *broaden-and-build schema* is defined, in part, based on their creativity and their desire to succeed, learn, and grow. The *broaden-and-build schema*, as it will be used and measured in this study, is an embodiment of many of the items a person has stored in memory or logged away as useful information and their capacity to use the items stored to come up with new and innovative ideas and concepts. One of the components of transformational leadership is *intellectual stimulation*. As mentioned when explaining components of transformational leadership, *intellectual stimulation* involves encouraging followers to challenge the norm and to answer their own questions, which gives the leader the opportunity to make use of their employee's creativity (Ryan, 2011). To try and get a better understanding of what a *broaden-and-build schema* is, it is proposed that one's *broaden-and-build schema* is derived from three established concepts within the existing field of research, especially related to the Broaden-and Build theory.

First, an individual's creativity is measured when it comes to analyzing one's *broaden-and-build schema*. Individual creativity can have a direct effect on a person's *broaden-and-build schema* because it is related to being able to do things independently. If individuals are not able to perform tasks on their own,

then they tend to be dependent on others. Supervisors and other colleagues tend to bear the brunt of the work because they are constantly micromanaging to make sure the employee is performing the appropriate task or coming up with ideas for the right task in any given situations. Performing independently gives the employee a chance to create their own ideas that could have the potential to enhance their own cognition and potential, especially in regards to specific tasks (Frederickson, 2013).

Zhou, Hirst, and Shipton (2012) define employee creativity as the employees' generation of novel and useful ideas concerning products, procedures, and processes at work. Employee creativity would be enhanced under leadership characterized by openness, encouragement, and support (Choi, Anderson, & Veillette, 2008). These characteristics are all representative of a transformational leader, which would lead one to believe that transformational leadership and the proposed new variable, *broaden-and-build schema,* are connected in some way. In developing creativity, it is important that subordinates come up with their own novel ideas instead of having to get direction from colleagues or their supervisor on a frequent basis.

Transformational leaders expect their followers to question assumptions, challenge the status quo, and experiment with potentially better approaches to their work (Weng & Rode, 2010). If a transformational leader uses their supportive demeanor towards their employees, then the creativity from the employees should flow more easily. Weng and Rode (2010) also mention that

leadership behaviors provide followers with enhanced feelings of personal capabilities, personal discretion, and responsibility. Transformational leaders can provide the type of climate for their employees to be more creative and open about ideas and suggestions.

Second, schemas are another term used in the psychology realm that can lead to a better understanding of a *broaden-and-build schema*. Schemas are rooted in a person's self-concept (Sims & Lorenzi, 1992). There are different kinds of schemas, but cognitive schema and self-schema are the most important in the hopes of defining one's *broaden-and-build schema*. Cognitive schema refers to the organization of knowledge about a particular concept (Sims & Lorenzi, 1992). The schema contains the features or attributes that are associated with a category membership (Sims & Lorenzi, 1992). Self-schema refers to generalizations about the self-abstracted from the present situation and past experiences (Sims & Lorenzi, 1992). Schemas refer to our identification with ourselves and others around us. For example, most people tend to attach a certain schema to a doctor, assuming that they have the proper training and knowledge to diagnose a certain illness. Schemas organize knowledge about specific stimulus domains and guide both the processing of new information and the retrieval of stored information (Sims & Lorenzi, 1992). Schemas are constructed through experiences with specific instances. They start as a simple network and develop into more complex structures.

Lastly, scripts play a key role in defining and enhancing one's *broaden-and-build schema*. Scripts and schemas tend to be similar concepts, but there are some distinct differences between the two. A script can be defined as a cognitive structure which is a mental representation of sequences of events that guides a person's behavior and their interpretations of behaviors in particular situations (Gioia, Donnellon, & Sims, 1989). An individual's script can be thought of as a chain. For example, when a person receives a letter in the mail that they would like to open, their brain processes a chain of commands. First, take the letter in their hand. Next, using a finger or letter-opener, open the envelope from the back from left to right along the top of the envelope. Then take the letter out of the envelope. Lastly, read the letter. Although this is something that is automatic for most people, the brain has been trained to develop and interpret this sequence based on past experiences.

Through the development of scripts and schemas, a person is identifying a pattern or routine based on past experiences. With the broaden-and-build component, there is an added feature in the concept of "building" on that broadened knowledge from past experiences or from others' experiences. Using concepts derived from scripts, schemas, and the Broaden-and-Build theory, one's *broaden-and-build schema* can now be used to assess one's understanding of their natural surroundings, encouragement and influence from their supervisor, and their ability to adapt to new and evolving tasks and functions.

Employee Motivation

Transformational leaders use techniques to increase an employee's drive and motivation. Transformational leaders need to figure out what motivates their employees to keep them coming back for more. If leaders can ignite that drive and passion within an employee to work beyond what they thought possible, then they would be considered a successful leader. Employee motivation can be defined as "a broad construct pertaining to the conditions and processes that account for the arousal and direction, magnitude and maintenance of effort in a person's job" (Katzell & Thompson, 1990, p. 144). Employee motivation is the force behind an individual employee's drive to succeed and go above and beyond for their company. If employees have a more developed sense of motivation and they see their position in the company as crucial or important, then they are more likely to want to contribute to the company (Martin, 2004). When there is a drive from the employee, they will likely be more connected to the company and solicit ideas to management instead of just doing day-to-day tasks and not making a mark in their position. This relates to creativity in the context of a new problem or task for the employee. With an enhanced sense of motivation, they give more attention to their need to find new and interesting solutions (Martin, 2004).

Motivation can be derived in two ways: intrinsically and extrinsically. Intrinsic motivation is the type of motivation a person has when they have a true desire to learn it or passion to pursue it from within (Baucum, 2008). For

example, a worker may truly enjoy collecting and analyzing data, which brings them happiness and is the reason that they got into the career that they did. On the other hand, extrinsic motivation involves a person doing something only for the sake of obtaining a particular outcome (Baucum, 2008). For example, collecting and analyzing data for a different employee may be just a stepping-stone into what they truly want to do and there is no satisfaction in their work. Even if an employee does their job well because of the respect they have for authority, they would be considered a good employee and properly motivated. The best employees are the ones who are both extrinsically and intrinsically motivated. If an employee is intrinsically motivated, the work tends to get done on its own because the employee is challenged from within. People will also tend to be most creative when they feel motivated by the interest, satisfaction and challenge of the work, rather than external factors, such as status or monetary gain (Katzell & Thompson, 1990). If an employee is not motivated to do better or have some sort of drive from within, then that is when the transformational leader will be truly challenged.

Hypothesis 2: Transformational leadership will be a stronger predictor of one's intrinsic motivation when compared to transactional leadership.

Hypothesis 3: Transformational leadership will be a stronger predictor of one's broaden-and-build schema when compared to transactional leadership.

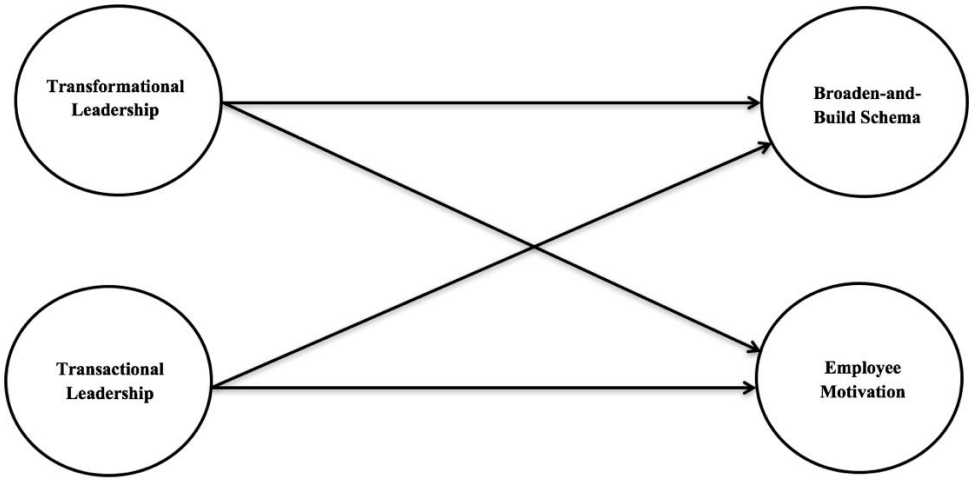


Figure 2. Model of the hypothesized relationships among transformational and transactional leadership and the proposed mediators, *broaden-and-build schema* and employee motivation.

Literature Review Summary

Transformational leaders possess all of the necessary characteristics to enhance their employees' *broaden-and-build schemas* and increase the motivation of their employees. The purpose of this study was to assess the same relationship between transformational leaders and transactional leaders and their subordinates' outcomes. Taking ideas and concepts already established from Frederickson's Broaden-and-Build theory (2001), an employee's motivation and *broaden-and-build schema*, which will be developed, in part, by their individual creativity, to see if the relationship is strengthened between the transformational or transactional leadership style and subordinate outcomes. If *broaden-and-build schema* and employee motivation is brought about due to

characteristics of their transformational leader, then job satisfaction will increase and an employee's perception of commitment to the organization will be enhanced as well.

Hypothesis 4: The relationship between transformational leadership and job satisfaction will be mediated by an employee's broaden-and-build schema.

Hypothesis 5: The relationship between transformational leadership and organizational commitment will be mediated by an employee's broaden-and-build schema.

Hypothesis 6: The relationship between transformational leadership and job satisfaction will be mediated by an employee's intrinsic motivation.

Hypothesis 7: The relationship between transformational leadership and organizational commitment will be mediated by an employee's intrinsic motivation.

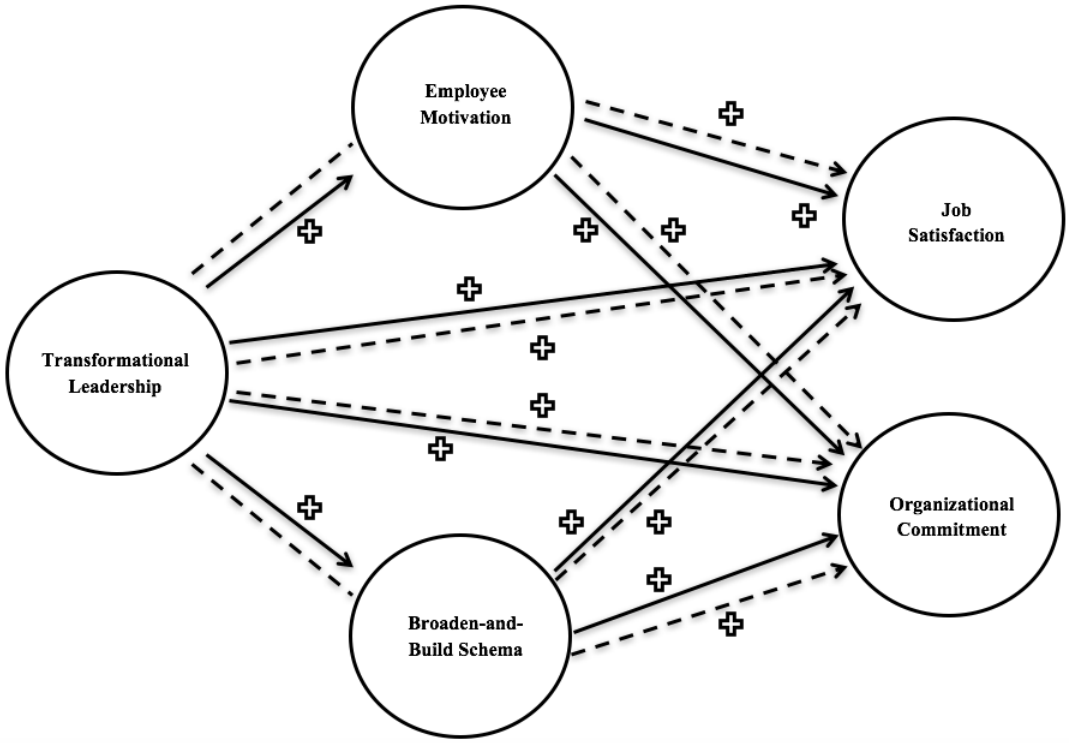


Figure 3. Model of the hypothesized relationships among transformational leadership, job satisfaction, organizational commitment, *broaden-and-build schema,* and employee motivation.

CHAPTER THREE

METHODOLOGY

Overview

This investigation is two-fold in that it sought to identify whether the relationship between transactional or transformational leadership was a better predictor of both organizational commitment and job satisfaction. If transformational leadership was shown to be a stronger predictor, then this study sought to find if employee motivation and *broaden-and-build schema* mediated the relationship between transformational leadership and the two outcomes, organizational commitment and job satisfaction. *Broaden-and-build schema* is considered a new construct developed in this study derived from research from Barbara Frederickson (2013) assessing one's ability to broaden or increase their knowledge on a particular subject and then building on that new knowledge in order to see through a new scope and create new opportunities for themselves. Since no survey could be identified in the organizational psychology field which included all the aspects that encompassed *broaden-and-build schema* as it has been presented in the research, a survey instrument was created entitled the *Broaden-and-Build Schema* Questionnaire. A pilot study was conducted to assess the validity and reliability of the new instrument. After an initial quantitative and qualitative analysis, the *Broaden-and-Build Schema* Questionnaire was deemed valid through the use of Cronbach's alpha. The main

study began and involved the *Broaden-and-Build Schema* Questionnaire along with other previously developed surveys given to random participants. The subsequent data analysis determined if subordinates who were exposed to transformational leaders were associated with higher levels of job satisfaction and organizational commitment because of their increased motivation and *broaden-and-build schemas*.

Research Design

This section describes the research design used in this study including participants, setting, survey instruments, data analysis, and analytical procedures in order to investigate data on relationship between leadership, outcomes, and their proposed mediators.

Pilot Study

Overview. A review of the literature uncovered no pre-existing measure that measured one's *broaden-and-build schema.* There were several measures that investigated parts of what was trying to be uncovered, but none of the other pre-existing measures were appropriate for what was attempting to be measured. When nothing was found in the current literature pertaining to this specific variable, it was concluded that creating a new research instrument would be the only way to answer the specific research questions. Since face validity could not be assumed with the newly created questionnaire, a pilot study was conducted to

examine the performance of this instrument. The 16-question pilot *Broaden-and-Build Schema* Questionnaire was administered to fully test this construct.

Instrument. The *Broaden-and-Build Schema* Questionnaire is a 16-question instrument looking at several different aspects of one's ability to broaden their knowledge of a specific construct and then their ability to build upon that new knowledge. This construct looks at the creativity of the individual, the freedom to be creative in their workplace atmosphere, and the drive of the individual to expand their knowledge. The questionnaire was completed by 51 participants who were gathered in two distinct groups. The first group (n=37) consisted of people from a local church with varying occupations randomly selected from a social networking site. The second group (n=14) consisted of people randomly selected from the networking site, *Craigslist*. The second group was also gathered with a complete array of different occupations which included, but is not limited to: floor manager, human resource specialist, teachers, and office assistants.

Objectives**.** The first objective was to determine whether *broaden-and-build schema* could be considered an instrument with sufficient validity and reliability to utilize in the main study. The second objective was to determine whether the configuration of the questionnaire was user-friendly and clear, thus capable of capturing the intended information necessary to complete the survey and collect the responses accurately and concisely.

The process of creating the *Broaden-and-Build Schema* Questionnaire involved first identifying and defining what it means to first broaden one's knowledge of a particular subject, but then also building upon that new knowledge. A subordinate's immediate surroundings play a key role in their ability to think freely and speak their mind in most situations. If one's creativity is stifled, a subordinate is much less likely to talk freely about new ideas or concepts. The use of creativity plays a key role in one's ability to build upon newly formed knowledge. Many people can gain intellect and broaden their knowledge, but this study strived to find if the building upon that knowledge is what makes certain subordinates stand out among other colleagues. In researching similar questionnaires and in speaking with professionals in the field of industrial and organizational psychology, especially those well-versed in Frederickson's concept of Broaden-and-Build theory (2013), 16 questions were created that were used to reflect the construct being presented.

Results. Internal consistency was measured using Cronbach's alpha, symbolized as α. The reliability for the *Broaden-and-Build Schema* Questionnaire was 0.922 for 16 items. With such a high reliability, it is important to note the high correlation between the questions themselves, but after testing pilot study participants and asking for feedback for the study, it was clear that while the items were related, they were not the same, thus showing the ability to measure the same construct across different items. Although item 13 was close to the cut-off point for corrected item-total correlation (0.34 because the item will

share at least 10% of the variance with the collection of items (Edwards, 1969)), it was viewed as acceptable and was kept in the construct, mostly due to the fact that the variable's reliability would only increase from 0.922 to 0.925 if the item was deleted. This was not a significant difference, so it was decided to leave all of the original 16 items in the construct. Results for the corrected item-total correlation can be found in Appendix A.

After obtaining results from the pilot study, factor analysis revealed that the survey consisted of three different factors. Those factors revolved around a subordinate's environment, a subordinate's supervisor, and the subordinate's personal capacity for coming up with novel ideas and concepts. These items were measured using a 5-point Likert scale ranging from "1-Strongly Disagree" to "5-Strongly Agree." Sample questions from the survey include "My creativity is encouraged by my supervisor" and "I have found new and creative ways to get my tasks done." Items were averaged to form a composite score so that high scores indicated higher levels of their *broaden-and-build-schema*. The full scale used in this assessment can be found in Appendix B.

Main Study

Participants. After the pilot study was conducted and reliability for the measure was tested, the main part of the study was then analyzed. For the main part of the study, 437 participants were surveyed. Participants were required to be full-time, non-exempt employees who have at least one immediate supervisor and have been with their company for at least six months. Data collection was

done in three phases: (a) friends and relatives with random job titles that fit the criteria to participate in the study (n=16), (b) participants with random job titles who agreed to participate that fit the criteria to participate in the study that were targeted from the social networking site, *Craigslist* (n=32), and (c) Ask Your Target Market company (n=389). Ask Your Target Market is a website in which random participants are paid to take surveys that match the demographics within their individual profiles. All participants in each phase of the study understood that participation in the study was voluntary. In the first two phases of the study, participants completed an online survey in exchange for a ticket in a raffle for a chance to win one of four $100 VISA gift cards. The survey was developed and dispersed with the online survey tool, Qualtrics, and were administered using a hyperlink through their personal e-mails. In the third stage of data collection, monetary rewards were given to participants who were using the online survey tool, Ask Your Target Market. Key demographic features of the sample were as follows: (a) 56% female and 44% male, (b) and a mean age of 37.17 years. Two other variables that were important in this study were tenure, the amount of time the employee has worked for their organization, and the number of employees assigned to each individual supervisor. The percentages of the sample that have worked for the specific amounts of time are as follows: 17.4% have worked for 6-11 months, 19.4% have worked for 1-2 years, 15.9% have worked for 3-4 years, 14.8% have worked for 5-6 years, 16.4% have worked for 7-10 years, and 16.1% have worked for 11 or more years. The percentages of the sample that had

specific numbers of employees under each supervisor are as follows: 24% of supervisors had 1-3 employees, 17.9% of supervisors had 4-6 employees, 23.8% of supervisors had 7-10 employees, 16.6% of supervisors had 11-20 employees, 7.7% of supervisors had 21-30 employees, 10% of supervisors had 31 or more employees. The demographics survey can be found in Appendix C.

Measures

Overview. This study was conducted utilizing four psychological scales from the transformational leadership and organizational psychology literature. This study also utilized the newly developed *Broaden-and-Build Schema* Questionnaire. The participants also filled out a short, demographic survey to control for the qualitative variables. All information and consent forms for all measures completed by the employees can be found in Appendix D.

Transformational and Transactional Leadership. The predictor variables are transformational leadership and transactional leadership, which were measured based on the results of the Multifactor Leadership Questionnaire Short Form, which is used to identify key characteristics of transformational or transactional based on subordinate responses (Avolio & Bass, 1990). There are three different scales with several subscales within each scale, which include transformational leadership, transactional leadership, and the laissez-faire non-leadership management style. Because this research only sought to find the transformational and transactional components of leadership, laissez-faire non-leadership management questions were left out. Within the transformational and

transactional scales, there are several subscales of each including *idealized influence, individualized consideration, intellectual stimulation*, and *inspiration* for the transformational leadership component and *contingent rewards* and *management-by-exception* for the transactional leadership component (Avolio & Bass, 1990). These items were measured using a 5-point Likert scale, with an "N/A" option as well, ranging from "0-Not at all" to "4-Frequently, if not always." This scale consists of items such as "The person I am rating specifies the importance of having a strong sense of purpose" as an example for the transformational leadership component and "The person I am rating provides me with assistance in exchange for my efforts" as an example for the transactional leadership component (Avolio & Bass, 1990). Between the four subscales of transformational leadership, the average alpha level for the transformational leadership scale was 0.90. Between the two subscales of transactional leadership, the average alpha level for the transactional leadership scale was 0.77. Items were initially grouped into transactional versus transformational type qualities. After the first hypothesis was run, transformational items were averaged to form a composite score so that high scores indicated higher levels of transformational leadership. The full scale used for this proposal can be found in Appendix E.

Job Satisfaction. Hackman and Oldham (1974) developed an extensive survey diagnosing and evaluating one's job. There are many components to the survey, including Job Dimensions, Psychological States, Growth Need Strength,

and Affective Responses to the Job (Hackman & Oldham, 1974). For the purposes of this study, only the General Satisfaction dimension was used to assess job satisfaction. This scale consists of 5 items that pertain to how individuals feel about their job. These items were measured using a 7-point Likert scale ranging from "1-Disagree Strongly" to "7-Agree Strongly." The scale consists of items such as "Generally speaking, I am very satisfied with my job" and "I frequently think of quitting this job" (Hackman & Oldham, 1974). The reliability of the General Satisfaction subscale within the Job Diagnostic Survey is 0.76. Items were averaged to form a composite score so that high scores indicated higher levels of job satisfaction. The full scale used in this assessment can be found in Appendix F.

Organizational Commitment. Organizational commitment was measured using an adaptation of the Organizational Commitment Questionnaire that was previously developed by Meyer and Allen (1991). This scale measures an employee's beliefs and feelings regarding their relationship with the organization (Meyer & Allen, 1991). This particular measure consists of 15 items with three subscales directly related to commitment: affective, normative, and continuance. The items were measured using a 7-point Likert scale that range from "1-Strongly Disagree" to "7-Strongly Agree." A couple of items that were used in this scale include "I would be very happy to spend the rest of my career with this organization" and "I would feel guilty if I left my organization now" (Meyer & Allen, 1991). Meyer and Allen (1991) reported different alpha levels for the three

different subscales: affective (α = .89), continuance (α = .84), and normative (α = .79). Items were averaged to form a composite score so that high scores indicated higher levels of organizational commitment. The reliability of the Organizational Commitment Questionnaire was 0.84. The full scale used in this assessment can be found in Appendix G.

Employee Motivation. The first proposed mediating variable was employee motivation. Employee motivation was measured using the Intrinsic Motivation Scale (Thakor, 1994). The Intrinsic Motivation Scale is comprised of seven items assessing individual differences in intrinsic and extrinsic motivational orientations. This scale aims to capture what it is about the job that the employee is motivated by. Using a 7-point Likert scale that ranges from "1-Strongly Disagree" to "7-Strongly Agree," employees responded to statements such as, "My job gives me a feeling of accomplishment" and "My job allows me to grow and develop as a person" to assess what the job does for an employee intrinsically (Thakor, 1994). The reliability for the Intrinsic Motivation Scale was 0.89. Items were averaged to form a composite score so that high scores indicated higher levels of employee motivation. The full scale can be found in Appendix H.

Broaden-and-Build Schema. The second proposed mediating variable is the subordinate's *broaden-and-build schema*. The *Broaden-and-Build Schema Questionnaire* was designed to measure how an employee's repertoire is broadened and then, separately, how the employee builds upon that broadened

knowledge. Based on the research done to define the *broaden-and-build schema* variable, items were developed to measure the degree of one's creativity and idea generation based on their supervisors, surroundings, and support (Frederickson, 2013).

After obtaining results from the pilot study, factor analysis revealed that the survey consisted of three different factors. Those factors revolved around a subordinate's environment, a subordinate's supervisor, and the subordinate's personal capacity for coming up with novel ideas and concepts. These items were measured using a 5-point Likert scale ranging from "1-Strongly Disagree" to "5-Strongly Agree." Sample questions from the survey include "My creativity is encouraged by my supervisor" and "I have found new and creative ways to get my tasks done." Items were averaged to form a composite score so that high scores indicated higher levels of their *broaden-and-build-schema*. The reliability for the *Broaden-and-Build Schema Questionnaire* was 0.92. The full scale used in this assessment can be found in Appendix B.

Control Variables. In order to reduce possible confounding effects, a number of control variables were utilized in this study. These variables consisted of: time in job (1 = 6-11 months, 2 = 1-2 years, 3 = 3-4 years, 4 = 5-6 years, 5 = 7-10 years, 6 = 11 or more years), hours per week (1 = 35-39 hours, 2 = 40-44 hours, 3 = 45-49 hours, 4 = 50-54 hours, 5 = 55-60 hours, 6 = 61 or more hours) and employees per supervisor (1 = 1-3 employees, 2 = 4-6 employees, 3 = 7-10

employees, 4 = 11-20 employees, 5 = 21-30 employees, 6 = 31 or more employees).

CHAPTER FOUR

RESULTS

Descriptive Statistics

Prior to analysis, the data set was cleaned and was assessed for missing data. Of the 437 responses, 406 participants returned completed surveys, resulting in a 93% response rate. Twenty-five surveys were returned with only one item missing for the entire survey and only 6 surveys accounted for 2-6 missing items. Using SPSS 22.0, the data set was examined to ensure it met the assumptions necessary for mediation analyses, namely that of normality, linearity, and the absence of homoscedasticity, multicollinearity, and outliers. All other assumptions were met except for a few outliers. It was determined that there were 16 multivariate outliers in the data set (using $3.3 > z < -3.3$) and these cases were deleted, resulting in a final sample size of 390 participants.

Because all of the data that was used in this analysis was survey data, the numbers were all in range with a few outliers mentioned above. *Broaden-and-build schema* and employee motivation were highly correlated with one another. The average participant in this study worked 40-44 hours per week and was at their respective company between 3-4 years. Means, standard deviations, scale reliabilities and intercorrelations for all study variables are presented in Table 1.

Regression Analyses

To test hypotheses 1-3, standard regression analysis using SPSS 22.0 was used. The two separate independent variables, transactional and transformational leadership, were run against the two separate dependent variables, organizational commitment and job satisfaction to determine which independent variable were stronger predictors of the dependent variables.

Hypothesis 1

Hypothesis 1 stated that transformational leadership will be a stronger predictor of both job satisfaction and organizational commitment when compared to transactional leadership. First, the relationship between transformational leadership and job satisfaction was analyzed. It was found that transformational leadership significantly predicted higher job satisfaction ($\beta = 0.240$, $p < 0.001$) ($R^2 = .058$). This significant relationship and R^2 match up with the assumptions for mediation established by Baron and Kenny (1986) discussed in the research design segment of the methods section for *Step 1* in both hypotheses 4 and 6. There was also a significant relationship between transactional relationship and job satisfaction ($\beta = -0.114$, $p < 0.05$) ($R^2 = .013$). Although both analyses were shown to be significant, transformational leadership led to significantly higher levels of job satisfaction, while transactional leadership led to significantly negative levels of job satisfaction ($t(389) = 7.63$, $p < .001$, $d = 1.46$). Next, the relationship between transformational leadership and organizational commitment

Table 1. Study Means, Standard Deviations, Intercorrelations, and Reliabilities

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Time in Job	3.42	1.73	-								
2. Hours per Week	2.21	1.12	0.076	-							
3. Employees per Supervisor	2.96	1.59	.187**	.155**	-						
4. Transformational Leadership	2.93	0.27	-0.012	0.026	0.028	**0.90**					
5. Transactional Leadership	2.15	0.39	0.012	-0.017	0.028	-0.105*	**0.77**				
6. Employee Motivation	3.93	0.55	0.067	.167**	0.058	.261**	-0.045	**0.89**			
7. *Broaden and Build Schema*	3.99	0.51	0.063	.111*	0.076	.211**	0.005	.753**	**0.93**		
8. Job Satisfaction	5.58	0.83	0.099	0.095	0.041	.240**	-0.114*	.579**	.523**	**0.76**	
9. Organizational Commitment	5.28	0.77	.159**	.118*	0.012	.316**	-0.112*	.619**	.592**	.566*	**0.84**

Note. N=390, *p<.05, **p<.01.

Time in Job (1=6-11 months, 2=1-2 years, 3=3-4 years, 4=5-6 years, 5=7-10 years, 6=11 or more years)

Hours per week (1=35-39 hours, 2=40-44 hours, 3=45-49 hours, 4=50-54 hours, 5=55-60 hours, 6=61 or more hours)

Employees per Supervisor (1=1-3 employees, 2=4-6 employees, 3=7-10 employees, 4=11-20 employees, 5=21-30 employees, 6=31 or more employees)

was analyzed. It was found that transformational leadership significantly predicted higher organizational commitment ($\beta = 0.316$, $p < 0.001$) ($R^2 = .100$). This significant relationship equation and R^2 match up with the assumptions for mediation established by Baron and Kenny (1986) discussed in the research design segment of the methods section for *Step 1* in both hypotheses 5 and 7. There was also a significant relationship between transactional relationship and organizational commitment ($\beta = -0.112$, $p < 0.05$) ($R^2 = .012$). Although both analyses were shown to be significant, transformational leadership led to significantly higher levels of organizational commitment, while transactional leadership led to significantly lower levels of organizational commitment ($t(389) = 6.53$, $p < .001$, $d = 2.32$).

Hypothesis 2

To test hypothesis 2 and 3, regression analysis was used as well. In an attempt to help predict the mediation, the mediating variables were run against the two separate types of leadership to help resolve which type of leadership predicted the mediating variables more powerfully. If transformational leadership is a stronger predictor of *broaden-and-build schema* and employee motivation than transactional leadership, then it will be certain that transformational leadership will fit into the mediation analysis better than transactional leadership for the overall model.

Hypothesis 2 stated that transformational leadership will be a stronger predictor of an employee's motivation when compared to transactional

leadership. To analyze this, the two types of leadership were compared with the mediating variable, employee motivation. First, the relationship between transformational leadership and employee motivation was analyzed. A significant regression equation was found ($F(1, 389) = 28.51$, $p < .001$), $R^2 = .068$. This significant regression equation and R^2 match up with the assumptions for mediation established by Baron and Kenny (1986) discussed in the research design segment of the methods section for *Step 2* in both hypotheses 6 and 7. Second, the relationship between transactional leadership and employee motivation was analyzed. A nonsignificant regression equation was found between transactional leadership and employee motivation ($F(1, 389) = .81$, $p = .37$), $R^2 = .002$. Although transactional leadership had a positive correlation coefficient, it was extremely low and nonsignificant. Transformational leadership was shown to be a better predictor of employee motivation than transactional leadership.

Hypothesis 3

Hypothesis 3 stated transformational leadership will be a stronger predictor of one's *broaden-and-build schema* when compared to transactional leadership. To analyze this, the two types of leadership were compared with the mediating variable, *broaden-and-build schema*. First, the relationship between transformational leadership and *broaden-and-build schema* were analyzed. A significant regression equation was found ($F(1, 389) = 18.08$, $p < .001$), $R^2 = .044$. This significant regression equation and R^2 match up with the assumptions

for mediation established by Baron and Kenny (1986) discussed in the research design segment of the methods section for *Step 2* in both hypotheses 4 and 5. Second, the relationship between transactional leadership and *broaden-and-build schema* was analyzed. A nonsignificant regression equation was found between transactional leadership and *broaden-and-build schema* ($F(1, 389) = .01$, $p = .926$), $R^2 = .000$. Transformational leadership was shown to be a better predictor of *broaden-and-build schema* than transactional leadership.

Mediation Analyses

For hypotheses 4-7, certain steps must be taken to ensure that mediation models *can* exist in this study. Using Baron and Kenny's (1986) three-step approach, regression analyses were conducted in the preceding results section above and all assumptions for a possible mediation were met.

To test hypotheses 4 through 7, a mediation model was tested with structural equation modeling (SEM) using MPlus Release 7 software (Muthén, L. K. & Muthén, B. O., 1998- 2012). With the number of participants in this study, MPlus statistical software (Muthén, L. K. & Muthén, B. O., 1998- 2012) provides the most powerful results. Instead of doing each individual mediation analysis through the Preacher and Hayes method (2008), the entire model was tested using the MPlus statistical package (Muthén, L. K. & Muthén, B. O., 1998- 2012). All variables used represent measured variables in the model. To evaluate the goodness of it of the models, the following indices were applied: Chi-square test

of model fit (χ^2); root-mean-square error of approximation (RMSEA); and comparative fit index (CFI). A value of RMSEA less than 0.05 indicates a good fit (Browne and Cudeck, 1993). A CFI over 0.90 is considered to be a reasonable fit for a model, but a CFI with a value of 0.95 or over is a model with a good fit (Bentler and Yuan, 1999).

First, the model was run to investigate how well the variables fit in the model. Maximum likelihood (ML) was used as the estimator in the models. The model was run first without controlling for any possible covarying variables. The measurement model showed a poor fit to the data ($\chi^2(3) = 345.55$, $p < .001$, CFI = 0.61, RMSEA = 0.527). Model modification indices were used in the model to identify where the model was not fitting appropriately. A second model was run when it was identified that the two mediating variables covaried highly between one another ($r = .756$). The final model showed a near perfect fit to the data ($\chi^2(2) = 0.07$, $p = 0.9672$, CFI = 1.00, RMSEA = 0.00). The inclusion of the path between the two mediators, motivation and *broaden-and-build schema*, resulted in a significant decrease of χ^2 ($\Delta\chi^2(1) = 345.48$, $p < .001$).

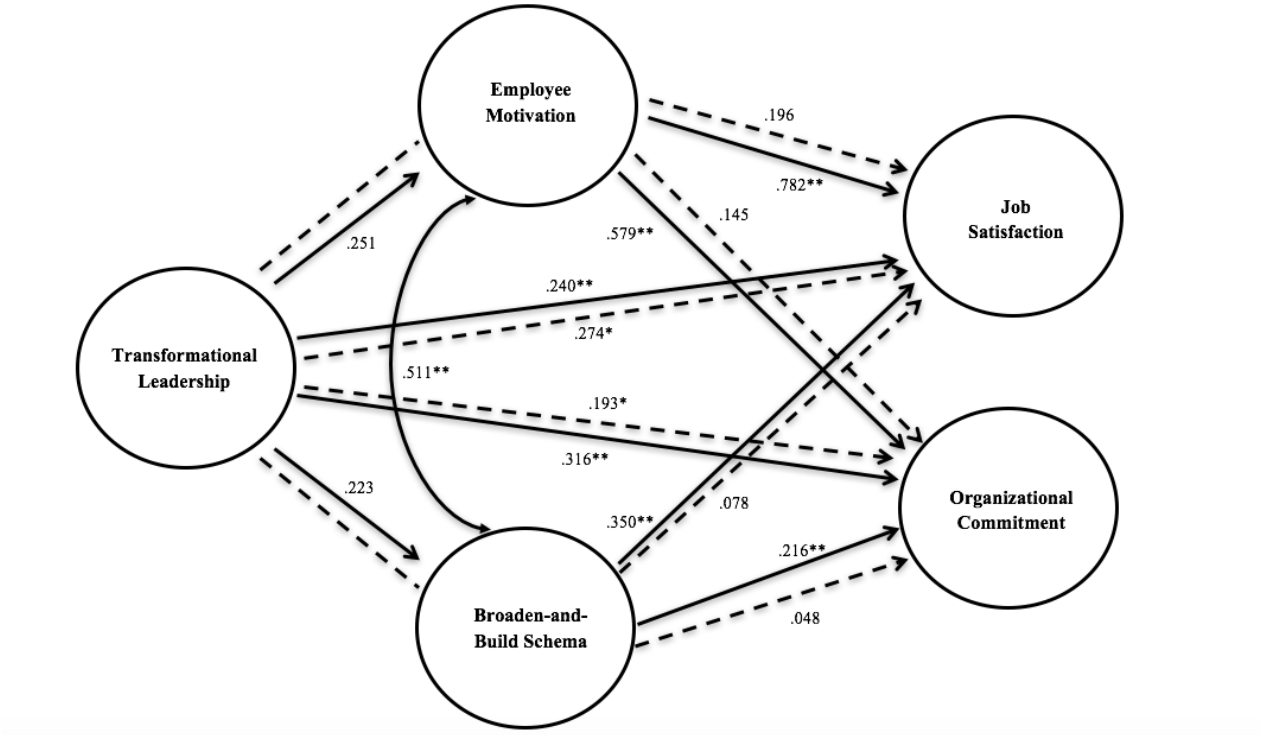


Figure 4. This figure portrays the results of the Proposed Structural Equation Modeling Model.

Hypothesis 4

In accordance with the Preacher and Hayes (2004) model, their three-step approach to assess for a possible mediation was used.

The relationship between transformational leadership and job satisfaction was expected to be mediated by an employee's *broaden-and-build schema*.

Step 1. Show that the predictor variable (transformational leadership) is correlated with the outcome variable (job satisfaction) (r = 0.053).

Step 2. Show that the predictor variable (transformational leadership) is correlated with the mediator variable (*broaden-and-build schema*) (r = 0.088).

Step 3. Show that the mediator variable (*broaden-and-build schema*) is correlated with the outcome variable (job satisfaction) (r = 0.607).

First, mediation in the relationship between transformational leadership and job satisfaction was tested with *broaden-and-build schema* as the mediating variable. The first mediation hypothesis, hypothesis 4, was not supported. The predictor variable, transformational leadership was not significantly related to *broaden-and-build schema* with a regression coefficient of 0.223 (*SE* = 0.125, p = 0.074). The predictor variable, transformational leadership, was significantly related to job satisfaction with a regression coefficient of 0.240 (*SE* = 0.152, p < 0.001). Additionally, *broaden-and-build schema* was significantly related to job satisfaction with a regression coefficient of 0.350 (*SE* = 0.093, p < 0.001). This significant regression equation and correlation coefficient match up with the three-step approach of assumptions for mediation established by Baron and Kenny (1986) discussed in the research design segment of the methods section for *Step 3* in hypothesis 4. The regression coefficient for the total effect between transformational leadership and job satisfaction with *broaden-and-build schema* as the mediating variable was 0.274 (*SE* = 0.153, p < 0.05). The total direct effect for this mediation was shown to be significant at p < 0.05 level. The total indirect effect of the mediation was found to be nonsignificant with a regression coefficient of 0.196 (*SE* = 0.118, p = 0.098). The effect size, determined by the proportion mediated, is shown to be large at 55%, which is the total effect that is explained by *broaden-and-build schema* in the relationship between

transformational leadership and job satisfaction. At this point, all three steps of Baron and Kenny's (1986) three-step approach for mediation were tested, but not necessarily all shown to be significant for this hypothesis suggesting that *broaden-and-build schema* does not mediate the relationship between transformation leadership and job satisfaction (see Figure 4).

Hypothesis 5

In accordance with the Preacher and Hayes (2004) model, their three-step approach to assess for a possible mediation was used.

The relationship between transformational leadership and organizational commitment was expected to be mediated by an employee's *broaden-and-build schema*.

Step 1. Show that the predictor variable (transformational leadership) is positively correlated with the outcome variable (organizational commitment) (r = 0.052).

Step 2. Show that the predictor variable (transformational leadership) is positively correlated with the mediator variable (*broaden-and-build schema*) (r = 0.088).

Step 3. Show that the mediator variable (*broaden-and-build schema*) is correlated with the outcome variable (organizational commitment) (r = 0.544).

Next, mediation in the relationship between transformational leadership and organizational commitment was tested with *broaden-and-build schema* as the mediating variable. The second mediation hypothesis proposed, hypothesis

5, was not supported. The predictor variable, transformational leadership was not significantly related to *broaden-and-build schema* with a regression coefficient of 0.223 (*SE* = 0.125, p = 0.074). The predictor variable, transformational leadership, was significantly related to organizational commitment with a regression coefficient of 0.316 (*SE* = 0.137, p < 0.001). Additionally, *broaden-and-build schema* was significantly related to organizational commitment with a regression coefficient of 0.216 (*SE* = 0.079, p < 0.05). This significant regression equation and correlation coefficient match up with the three-step approach of assumptions for mediation established by Baron and Kenny (1986) discussed in the research design segment of the methods section for *Step 3* in hypothesis 5. The regression coefficient for the total effect between transformational leadership and organizational commitment with *broaden-and-build schema* as the mediating variable was 0.193 (*SE* = 0.109, p < 0.05). The total direct effect for this mediation was shown to be significant at p < 0.05 level. The total indirect effect of the mediation was found to be nonsignificant with a regression coefficient of 0.048 (*SE* = 0.032, p = 0.135). The effect size, determined by the proportion mediated, is shown to be large at 37%, which is the total effect that is explained by *broaden-and-build schema* in the relationship between transformational leadership and organizational commitment. At this point, all three steps of Baron and Kenny's (1986) three-step approach for mediation were tested, but not necessarily all paths were shown to be significant for this hypothesis suggesting

that *broaden-and-build schema* does not mediate the relationship between transformation leadership and organizational commitment (see Figure 4).

Hypothesis 6

In accordance with the Preacher and Hayes (2004) model, their three-step approach to assess for a possible mediation was used.

The relationship between transformational leadership and job satisfaction was expected to be mediated by an employee's intrinsic motivation.

Step 1. Show that the predictor variable (transformational leadership) is correlated with the outcome variable (job satisfaction) ($r = 0.053$).

Step 2. Show that the predictor variable (transformational leadership) is correlated with the mediator variable (employee motivation) ($r = 0.082$).

Step 3. Show that the mediator variable (employee motivation) is correlated with the outcome variable (job satisfaction) ($r = 0.690$).

Next, mediation in the relationship between transformational leadership and job satisfaction was tested with employee motivation as the mediating variable. The third mediation hypothesis proposed, hypothesis 6, was not supported. The predictor variable, transformational leadership was not significantly related to employee motivation with a regression coefficient of 0.251 ($SE = 0.150$, $p = 0.094$). The predictor variable, transformational leadership, was significantly related to job satisfaction with a regression coefficient of 0.240 ($SE = 0.152$, $p < 0.001$). Additionally, employee motivation was significantly related to job satisfaction with a regression coefficient of 0.782 ($SE = 0.078$, $p < 0.001$).

This significant regression equation and correlation coefficient match up with the three-step approach of assumptions for mediation established by Baron and Kenny (1986) discussed in the research design segment of the methods section for *Step 3* in hypothesis 6. The regression coefficient for the total effect between transformational leadership and job satisfaction with employee motivation as the mediating variable was 0.274 (SE = 0.153, $p < 0.05$). The total direct effect for this mediation was shown to be significant at $p < 0.05$ level. The total indirect effect of the mediation was found to be nonsignificant with a regression coefficient of 0.078 (SE = 0.048, $p = 0.107$). The effect size, determined by the proportion mediated, is shown to be large at 60%, which is the total effect that is explained by employee motivation in the relationship between transformational leadership and job satisfaction. At this point, all three steps of Baron and Kenny's (1986) three-step approach for mediation were tested, but not necessarily all shown to be significant for this hypothesis suggesting that employee motivation does not mediate the relationship between transformation leadership and job satisfaction (see Figure 4).

Hypothesis 7

In accordance with the Preacher and Hayes (2004) model, their three-step approach to assess for a possible mediation was used.

The relationship between transformational leadership and organizational commitment was expected to be mediated by an employee's intrinsic motivation.

Step 1. Show that the predictor variable (transformational leadership) is correlated with the outcome variable (organizational commitment) (r = 0.052).

Step 2. Show that the predictor variable (transformational leadership) is correlated with the mediator variable (employee motivation) (r = 0.082).

Step 3. Show that the mediator variable (employee motivation) is correlated with the outcome variable (organizational commitment) (r = 0.629).

Lastly, mediation in the relationship between transformational leadership and organizational commitment was tested with employee motivation as the mediating variable. The fourth mediation hypothesis proposed, hypothesis 7, was not supported. The predictor variable, transformational leadership was not significantly related to employee motivation with a regression coefficient of 0.251 (*SE* = 0.150, p = 0.094). The predictor variable, transformational leadership, was significantly related to organizational commitment with a regression coefficient of 0.316 (*SE* = 0.137, p < 0.001). Additionally, employee motivation was significantly related to organizational commitment with a regression coefficient of 0.579 (*SE* = 0.066, p < 0.001). This significant regression equation and correlation coefficient match up with the three-step approach of assumptions for mediation established by Baron and Kenny (1986) discussed in the research design segment of the methods section for *Step 3* in hypothesis 7. The regression coefficient for the total effect between transformational leadership and organizational commitment with employee motivation as the mediating variable was 0.193 (*SE* = 0.109, p < 0.05). The total direct effect for this mediation was

shown to be significant at $p < 0.05$ level. The total indirect effect of the mediation was found to be nonsignificant with a regression coefficient of 0.145 (*SE* = 0.088, $p = 0.100$). The effect size, determined by the proportion mediated, is shown to be large at 43%, which is the total effect that is explained by employee motivation in the relationship between transformational leadership and organizational commitment. At this point, all three steps of Baron and Kenny's (1986) three-step approach for mediation were tested, but not necessarily all shown to be significant for this hypothesis suggesting that employee motivation does not mediate the relationship between transformation leadership and organizational commitment (see Figure 4).

CHAPTER FIVE

DISCUSSION

Overview

The purpose of this study was to explore the relationships in which transformational and transactional leadership impact particular subordinate outcomes related to job satisfaction and organizational commitment. It has been shown in previous studies that when leaders have transformational qualities, as opposed to transactional qualities, a subordinate will experience higher levels of job satisfaction and organizational commitment (Avolio & Gardner, 2005; Chi et al., 2011; Koppes-Bryan et al., 2012; Schmit & Strange, 2010). The question that this study was trying to address was *how* do transformational leaders steer their subordinates to these desired outcomes. Using a popular mediator in the business field, employee motivation, and a new proposed mediating variable, *broaden-and-build* schema, that relationship was tested to find if these mediating variables explained how transformational leaders consistently tend to predict higher satisfaction and organizational commitment.

Broaden-and-build schema encapsulates many of the traits that transformational leadership offers to their subordinates (Frederickson, 2013). *Broaden-and-build schema* encourages employees to think outside of the box and outside of what their leader tells them (Frederickson, 2013). It is important for employees to do their job, but if they are able to do that job in a creative way

and expand the idea and increase efficiency in the process, then the employee becomes more of an asset to the company and to the leader (Frederickson, 2013). Based on this idea and concept, it seemed crucial to use these concepts as they relate to the atmosphere and environment that the subordinate must work with and in. If the subordinate is constantly learning new techniques and then striving for new and improved methods on top of what they have learned, then it seems likely that they will succeed and reach goals faster than the average employee (Frederickson, 2013). It is with this mindset that using this new variable as a mediator for this relationship seemed like a perfect fit.

Once transformational leadership was tested and shown to be a better predictor of both job satisfaction and organizational commitment when compared to transactional leadership, employee motivation and *broaden-and-build schema* were examined as two separate mediators in the relationship. This study contributes to the continuing research exploring mediators between transformational leadership and subordinate outcomes and it also introduced a new variable, *broaden-and-build schema*, which examines one's ability to broaden their knowledge of a specific construct and then further analyzes the individual's ability to build upon that broadened knowledge. *Broaden-and-build schema* looks at the creativity of the individual, the freedom to be creative in their workplace atmosphere, and the drive of the individual to expand their knowledge.

Overall, it was found that transformational leadership not only predicted high, positive levels of satisfaction and commitment, but transactional leadership

ended up predicting low, negative levels of satisfaction and commitment. Unfortunately, in regards to mediation, all four hypothesized mediations were shown to be nonsignificant at the $p < .05$ level.

Hypothesis 1

The results of this study are consistent with past research showing that transformational leadership is associated with better outcomes than with transactional leadership (Avolio & Gardner, 2005; Chi, Chung, & Tsai, 2011; Koppes-Bryan et al., 2012; Schmit & Strange, 2010;). Additionally, the results of this study are consistent with past research linking transformational leadership to high levels of job satisfaction and organizational commitment (Rylander, 2003; Sarwat et al., 2011; Yukl, 2010). As indicated by the regression analysis for hypothesis 1, transformational leadership predicted both organizational commitment and job satisfaction better than transactional leadership. The implications of such findings suggest that organizations wanting employees who are committed to their organizations and satisfied with their jobs would benefit from selecting and training individuals with characteristics of transformational leaders as opposed to transactional leaders.

Hypothesis 2

Additionally, the results of this study are consistent with Katzell and Thompson's (1990) research showing that creativity plays a key role in a

subordinate's drive to do well in their job. This research is directly related to transformational leaders as opposed to transactional leaders in that it is more characteristic of a transformational leader to want to motivate a subordinate not through money or benefits, but through an internal drive of the employee to intrinsically want to do well in their job. As indicated by the regression analysis for hypothesis 2, transformational leadership predicted employee motivation better than transactional leadership. The implications of such findings suggest that organizations wanting more motivated employees should hire and train people with characteristics of transformational leaders as opposed to transactional leaders.

Hypothesis 3

The results of this study are also consistent with Broaden-and Build theory (Frederickson, 2013) in that transformational leadership encourages subordinates to go beyond simple exchange relationships to find what drives them. As indicated by the regression analysis for hypothesis 3, transformational leadership predicted *broaden-and-build schema* better than transactional leadership. In turn, transactional leaders, as they are defined, do not tend to prioritize creativity and the ability to come up with new ideas and expound on that new knowledge. The traits of being open and willing to continue to develop, which are characteristic of the transformational leader, will lead to more positive outcomes, especially in regards to organizational commitment and job

satisfaction. The implications of such findings suggest that organizations wanting employees with an ability to broaden their knowledge in new and creative ways and then build upon that new knowledge would be better suited to find people with characteristics of transformational leaders as opposed to transactional leaders.

Considering these results for hypotheses 1 through 3, there are strong implications that working for a transformational leader has many long-term benefits in the workforce. In regards to hypothesis 1, it was shown that a transformational leader provides an atmosphere where their employee can be creative and open leading to a greater sense of job satisfaction and a greater overall commitment to the organization. In fact, when one is working with a transactional leader, the employee often experiences less job satisfaction and organizational commitment as it correlates negatively with transactional leaders in a significant way.

Hypothesis 4

Beginning with the first mediator, *broaden-and-build schema* did not mediate the relationship between transformational leadership and job satisfaction. While *broaden-and-build schema* does not explain the relationship between transformational leadership and job satisfaction, it is important to note that the mediation was positive, even though it is fairly small and marginally significant (β = .196, p = .098). The effect size is large at 55%, which is a

significant portion of the relationship between transformational leadership and job satisfaction that *broaden-and-build schema* is explaining. This result suggests that while *broaden-and-build schema* may be present in the relationship, it is not explaining the relationship in a significant way. While certain characteristics of transformational leadership (inspirational motivation, intellectual stimulation, and individual consideration) may help an employee come up with unique ideas and feel as if their voice is heard, thus enhancing their satisfaction in their job, in this particular instance, *broaden-and-build schema* does not play a significant role (Arnold et al., 2007; Frederickson, 2013). When an employee's sense of belonging is increased and they feel like they are an integral part of the team, which is what tends to come about in the Broaden-and-Build theory, they are more invested and, therefore, have a higher sense of job satisfaction (Frederickson, 2013). This result indicates that transformational leaders tend to produce employees who are more satisfied with their work, but unfortunately it is not brought about from their ability to broaden their knowledge and build upon that new, broadened knowledge.

Hypothesis 5

In examining the fifth hypothesis, *broaden-and-build schema* did not seem to mediate the relationship between transformational leadership and organizational commitment. While *broaden-and-build schema* does not explain the relationship between transformational leadership and organizational

commitment, it is important to note that the mediation was positive, even though it is fairly small and nonsignificant (β = .048, p = .135). This result suggests that while *broaden-and-build schema* may be present in this particular relationship, it is not explaining the relationship in a significant way. While certain characteristics of transformational leadership (inspirational motivation, intellectual stimulation, and individual consideration) may help an employee come up with unique ideas and feel as if their voice is heard, thus enhancing their commitment to their organization, in this particular instance, *broaden-and-build schema* does not play a significant role (Arnold et al., 2007; Frederickson, 2013). When an employee's sense of belonging is increased and they feel like they are an integral part of the team, which is what tends to come about from the Broaden-and-Build theory, they are more invested and, therefore, have a higher sense of organizational commitment (Rylander, 2003; Frederickson, 2013). This result indicates that transformational leaders tend to produce employees who are more committed to their organization, but unfortunately it is not born from their ability to broaden their knowledge and build upon that new, broadened knowledge.

For hypotheses 4 and 5, we can conclude that *broaden-and-build schema* is not necessarily a negative thing to desire in an employee. For the outcome variable, job satisfaction, *broaden-and-build schema* did not mediate the relationship by making it stronger, but it does not necessarily mean that *broaden-and-build schema* might somehow be involved in the mediation process (from .274 (direct effect) to .048 (indirect effect)). For the outcome variable,

organizational commitment, *broaden-and-build schema* did not mediate the relationship, but it does not necessarily mean that *broaden-and-build schema* might somehow be involved in the mediation process (from .193 (direct path) to .078 (indirect path)). While both relationships decreased in their coefficient, they are still positive even though they are nonsignificant.

Hypothesis 6

Employee motivation did not mediate the relationship between transformational leadership and job satisfaction. While employee motivation does not explain the relationship between transformational leadership and job satisfaction, it is important to note that the mediation is positive, even though it is fairly small and marginally significant ($\beta = .078$, $p = .107$). The effect size is large at 60%, which is a significant portion of the relationship between transformational leadership and job satisfaction that employee motivation is explaining. This result suggests that while employee motivation may be present in the relationship, it is not explaining the relationship in any significant way. While certain characteristics of transformational leadership (inspirational motivation, intellectual stimulation, and individual consideration) may help an employee bring about something within them in order to motivate them from within, thus increasing their overall satisfaction in their job, in this particular instance, employee motivation does not play a significant role (Arnold et al., 2007). When an employee is motivated by their leader, they are more invested and are more

satisfied while working at their job. This result indicates that transformational leaders tend to produce employees who are more satisfied with their leader and workplace, but unfortunately it is not born from motivation given to them by their leader or immediate surroundings.

Hypothesis 7

In examining the final mediator, employee motivation did not mediate the relationship between transformational leadership and organizational commitment. While employee motivation does not explain the relationship between transformational leadership and organizational commitment, it is important to note that the mediation is positive, even though it is fairly small and nonsignificant (β = .145, p = .100). The effect size is small, but potentially meaningful at 43%, which is a significant portion of the relationship between transformational leadership and organizational commitment that employee motivation is explaining. This result suggests that while employee motivation may be present in the relationship, it is not explaining the relationship in a significant way. While certain characteristics of transformational leadership (inspirational motivation, intellectual stimulation, and individual consideration) may help an employee bring about something within them in order to motivate them from within, thus enhancing their commitment to their job, in this particular instance, employee motivation does not play a significant role (Rylander, 2003). When an employee is motivated by their leader, they are more invested and,

therefore, have a higher sense of organizational commitment. This result indicates that transformational leaders tend to produce employees who are committed to their organization, but unfortunately it is not brought about from motivation given to them by their leader or immediate surroundings.

For hypotheses 6 and 7, we can conclude that motivated employees are not necessarily something a leader should avoid. For the outcome variable, job satisfaction, employee motivation did not mediate the relationship by making it stronger, but it does not necessarily mean that employee motivation might somehow be involved in the mediation process (from .274 (direct effect) to .196 (indirect effect)). For the outcome variable, organizational commitment, employee motivation did not mediate the relationship, but it does not necessarily mean that employee motivation might somehow be involved in the mediation process (from .193 (direct path) to .145 (indirect path)). When considering both mediator variables, it is important to note the slight decrease in the employee motivation variable as opposed to the *broaden-and-build schema* variable. The indirect effect for the relationships surrounding employee motivation only decreased slightly, meaning that employee motivation does play a role in this relationship, but unfortunately, not a significant role in this study.

Limitations of the Study

A potential limitation of this study is the possibility of common source bias. All ratings came from the employees. It may benefit future research to obtain

data from supervisors as well as it pertains to their employees' levels of motivation and *broaden-and-build schema*. In order to analyze the data from both angles, it would prevent less bias to obtain data from both sides.

Another limitation of the study was the reliance on employees to provide good feedback on their leaders. If an employee marks items on the Multifactor Leadership Questionnaire incorrectly, then the rest of the survey could be mishandled based on how the participant classified their leader.

Another limitation that was found that led to the modified result was the high correlation between the two mediating variables. Employee motivation and *broaden-and-build schema* have somewhat close ties in their relation to one another. The *broaden-and-build schema*, in and of itself was designed to portray a sense of belonging and commitment to an organization because of the draw that the individual has with the organization. Motivation may be directly connected with this variable leading to the high correlation between the two. Employees with high levels of *broaden-and-build schema* also tend to have high levels of motivation.

Even though the variable was tested, *broaden-and-build schema* is not a known, tested variable that has been around for a long time. The number of participants in the pilot study was fairly low and it would be effective on the part of the researcher to have access to more people so a more significant result could be achieved. Also, in regards to the new measure, it would have been helpful to speak with each individual participant about their experience with the

new variable being tested. Asking participants basic questions such as “Were the questions clear and concise?’ or “Did the questions capture what the researcher was hoping to capture?” would be helpful in developing the survey more and providing a more general or specific scope for the participant.

Strengths of the Study

A major strength of this study was that the data produced findings indicative of high levels of transformational leadership correlating with high levels of organizational commitment and job satisfaction, which is consistent with the literature (Avolio & Gardner, 2005; Chi, Chung, & Tsai, 2011; Koppes-Bryan et al., 2012; Schmit & Strange, 2010). If these correlations were not shown to be significant or were shown to be more predictive of transactional leadership, a lot of the research and support would have gone to waste.

Another major strength of this study was the use of the new construct, *broaden-and-build schema.* This construct can now be tested again and used by other researchers in hopes of finding more connections in this field of study. Using ideas from Frederickson (2001; 2013), *broaden-and-build schema* can now be assessed and measured using the *Broaden-and-Build Schema* Questionnaire*.* The fact that no items had to be removed indicated a correlation between the items, which in turn shows its dedication to define one particular construct. This new variable, while it does not explain some relationships mentioned in this study, can certainly be used in research in this area. Especially with the rise of

coaching, mentoring, and the transformational leader era, it will be interesting to see the new ideas and constructs that are developed out of this research.

Future Research

The present research has contributed to research in two ways. First, the *broaden-and-build schema* construct was introduced. Through the use of a pilot study and going even further in the main study, *broaden-and-build schema* was shown to be an effective tool in examining one's ability to broaden their knowledge on ideas and concepts and then build upon that new knowledge. Secondly, the present research contributed to the transformational leadership literature by confirming its effects on both job satisfaction and organizational commitment. Moreover, this research sought to expose the underlying reasons why transformational leadership leads to certain subordinate outcomes. Using employee motivation and the newly developed *broaden-and-build schema* construct, this study analyzed these popular relationships and found that while the two mediators did not mediate the relationships between the known variables, they did not negatively affect them either. As difficult as it may be to find nonsignificant relationships in research, this study will provide necessary examination of these relationships to future researchers looking to examine these same relationships. Future research should work to address the limitations of the study mentioned above and use *broaden-and-build schema* in more areas where creativity and atmosphere provided by the employee's leader is being tested.

Conclusion

The value of any research is found in two areas: its significance to users and its usefulness for future research. With regard to its significance to users, this research, once again, suggests that the behavior of leaders *does* matter. It is clear from this study that transformational leaders are good resources for organizations. The best way for an organization to flourish is to take an interest in their employees. The way in which a leader leads is the cornerstone of any organization and the moment that organizations realize this crucial fact is the moment that subordinates will begin to truly care about their jobs and their organizations.

At the end of the day, all businesses are trying to thrive. Attempting to take the "road less traveled" and work at being a motivator and inspirer instead of a micromanager is harder, but as the results in this study show the "road less traveled" is worth it! Leaders will be more respected, care more for their employees, and in the end, deliver better results on account of their willingness to get at the heart of the matter.

Hopefully this study will reiterate the importance of transformational leaders. Using this study will help in further research because it is just another example of how transformational leadership leads to coveted outcomes for an organization (Avolio & Gardner, 2005; Chi, Chung, & Tsai, 2011; Koppes-Bryan et al., 2012; Schmit & Strange, 2010). It is difficult to measure who will be a transformational leader based solely on the hiring process, but transformational

leaders consistently deliver positive results as verified in this study. This study will also provide a useful new construct for future research in trying to pinpoint what it is exactly that transformational leaders bring about in their employees. It is the intent of this researcher to continue his quest for knowledge, and it is his hope that this study will contribute and further the body of knowledge established in this renowned field of study.

APPENDIX A

CORRECTED ITEM-TOTAL CORRELATIONS FOR *BROADEN-AND-BUILD SCHEMA* IN PILOT STUDY

Broaden-and-Build Schema Questionnaire	
Broaden-and-Build Schema Question	Corrected Item-Total Correlation
1. I am in a place where my creativity is welcomed.	0.71
2. My creativity is encouraged by my supervisor.	0.66
3. My creativity is encouraged by my environment.	0.64
4. I am challenged by my work on a regular basis.	0.53
5. My supervisor gives me the freedom to complete tasks independently.	0.52
6. I have found new and creative ways to get my tasks done.	0.63
7. My leader encourages me to try new ideas.	0.71
8. I am supported at work to try new challenges.	0.73
9. My leader gives me the discretion/freedom to design my own solutions to work problems.	0.68
10. My supervisor encourages me to try new challenges.	0.75
11. I don't have the opportunity to develop new skills.	0.5
	0.61

12. I am engaged in creative type work on a regular basis.	
13. I usually try to find an answer to a problem by myself before going to others.	0.35
14. My supervisor encourages me to develop innovative ways to solve problems.	0.73
15. My supervisor allows me to come up with my own ideas for certain problems.	0.65
16. I find creative ways to link up processes in my work (e.g. putting together presentations, proposals, etc.).	0.65

APPENDIX B

BROADEN-AND-BUILD SCHEMA QUESTIONNAIRE

Broaden-and-Build Schema **Questionnaire**

Please rate the degree to which you agree with the following descriptive statements regarding your current job. For each statement, please indicate much you agree or disagree with each statement pertaining to your current job. Mark the appropriate rating that corresponds to your judgment.

The rating scale is as follows:

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

1. I am in a place where my creativity is welcomed.

2. My creativity is encouraged by my supervisor.

3. My creativity is encouraged by my environment.

4. I am challenged by my work on a regular basis.

5. My supervisor gives me the freedom to complete tasks independently.

6. I have found new and creative ways to get my tasks done.

7. My leader encourages me to try new ideas.

8. I am supported at work to try new challenges.

9. My leader gives me the discretion/freedom to design my own solutions to work problems.

10. My supervisor encourages me to try new challenges.

11. I don't have the opportunity to develop new skills.*

12. I am engaged in creative type work on a regular basis.

13. I usually try to find an answer to a problem by myself before going to others.

14. My supervisor encourages me to develop innovative ways to solve problems.

15. My supervisor allows me to come up with my own ideas for certain problems.

16. I find creative ways to link up processes in my work (e.g. putting together presentations, proposals, etc.).

*denotes reverse coding

APPENDIX C

DEMOGRAPHICS SURVEY

Demographics Survey

1. What is your age?

2. What is your gender?
   - Male
   - Female

3. What is the length of time that you have been at your job?
   - 6-11 months
   - 1-2 years
   - 3-4 years
   - 5-6 years
   - 7-10 years
   - 11 or more years

4. What is current job title?

5. How many hours do you work per week on average?
   - 35-39 hours
   - 40-44 hours
   - 45-49 hours
   - 50-54 hours
   - 55-60 hours
   - 61 or more hours

6. How many total people are there in your company?
   - Under 10 people
   - 11-20 people
   - 21-50 people
   - 51-100 people
   - 101-500 people
   - 501-1000 people
   - 1001-5000 people
   - 5001-10000 people
   - 10001-25000 people
   - Not sure

7. How many people are managed by your same supervisor?
   - 1-3
   - 4-6
   - 7-10
   - 11-20
   - 20-30

30 or more

8. Which of the following categories best describes your primary area of employment (regardless of your current position)?

Agriculture, Forestry, Fishing
Arts, Entertainment, or Recreation
Broadcasting
Education
Construction
Finance
Insurance
Government and Public Administration
Health Care and Social Assistance
Hotel and Food Services
Information – Services and Data
Information – Other
Processing
Legal Services
Manufacturing – Computer and Electronics
Manufacturing – Other
Military
Mining
Publishing
Real Estate, Rentals, or Leasing
Religious
Retail
Scientific or Technical Services
Software
Telecommunications
Transportation and Warehousing
Utilities
Wholesale
Other

Which of the following best describes your role in industry?

Upper Management
Middle Management
Junior Management
Support Staff
Non-Management Position
Administrative Staff
Trained Professional
Skilled Laborer
Consultant

Temporary Employee
Researcher
Other

APPENDIX D

INFORMATION SHEET AND CONSENT FORM

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

College of Social and Behavioral Sciences
Department of Psychology

TITLE: The Role of Broaden-and-Build Schema and Motivation in the Relationship between Transformational Leadership and Subordinate Outcomes

PROJECT DIRECTOR: Colby Hilken (Advisor – Janelle Gilbert)

PHONE NUMBER: 949-444-9666 **E-MAIL:** hilkenc@coyote.csusb.edu

DEPARTMENT: Social and Behavioral Sciences

The Department of Psychology at California State University, San Bernardino supports the practice of protection of human participants in research. That being said, you are invited to participate in a study to investigate the relationship between leaders and their employees' outcomes. This study has been approved by the Department of Psychology Institutional Review Board Sub-Committee of California State University, San Bernardino. A copy of the official Psychology IRB Stamp of approval appears at the bottom of this page.

In this study, you will answer questions about two things: What type of supervisor you have, and what your supervisor does to improve outcomes in the workplace. The survey should take approximately 45 minutes to complete.

Since no identifying information will be collected in this study, your name and company cannot be connected with your responses and hence your data will remain completely anonymous. All data will be stored in password protected computers and only the project director and advisor will have access to the data. The results from this study will be included in the project director's Master's thesis. Data will be destroyed five years after the thesis has been completed.

Your participation in this study is completely voluntary. You are free not to answer any questions and to withdraw at any time. This study involves no risk beyond those of everyday life. Should you choose to participate in this study and finish the study in its entirety, four of the participants will be chosen at random to receive a $100 VISA gift card. All survey questions must be answered in order to be considered for the reward. To ensure validity of the study, please do not share any information pertaining to the study to other known participants.

If you have any questions about this study, please feel free to contact the project director via phone or email. Summary results of this study will be available after June 15, 2015. If you are interested in the results, please email the Project Director after June 15, 2015 and they will be provided to you.

Consent Agreement: I acknowledge that I have been informed of, and understand the nature and purpose of this study, and I freely consent to participate. I acknowledge that I am at least 18 years of age.

There has been a revision in the survey and approximate timing has changed since the IRB approval was given. The survey will only take approximately 20 minutes to complete.

There are some qualifications for the study to ensure that the data collected represents the workforce. In order to participate in this survey, you must:

1.) Be 18 years of age or older

2.) Be employed with your current company for at least 6 months or more

3.) Be a full-time employee (35 or more hours per week)

4.) Have at least one immediate supervisor

At the end of survey, there is a link to connect you to a separate survey that will record your personal information to be submitted into the drawing for 1 of 4 $100 VISA gift cards. This is done to maintain confidentiality and separate the survey from the survey taker.

Please read the following statement and then read the final paragraph before proceeding to the survey.

I acknowledge that I have been informed of, and understand the nature and purpose of this study, and I freely consent to participate. I acknowledge that I am at least 18 years of age.

By entering your initials and date, you understand the above conditions and understand that this survey is completely voluntary. At the end of this survey, you will be prompted to enter your name and e-mail address to be

contacted if you win the random drawing at the end of the data collection process.

Participant's Initials: _____

Date: _____

APPENDIX E

MULTIFACTOR LEADERSHIP QUESTIONNAIRE – 5X (SHORT SCALE)

Multifactor Leadership Questionnaire – 5X (Short Scale)

Please rate the degree to which you agree with the following descriptive statements regarding your current immediate team manager or supervisor. For each statement, please judge how frequently your current immediate team manager or supervisor has displayed the behavior described. Then circle the appropriate rating that corresponds to your judgment. When the item is irrelevant or does not apply, or where you are uncertain or do not know, please check "N/A" section.

The rating scale is as follows:

Not at all	Once in a while	Sometimes	Fairly Often	Frequently, If not Always	Uncertain or Do not know
0	1	2	3	4	N/A

1. Provides me with assistance in exchange for my efforts
2. Reexamines critical assumptions to question whether they are appropriate*
3. Focuses attention or irregularities, mistakes, exceptions, and deviations from standards
4. Talks about his/her most important values and beliefs*
5. Seeks different perspectives when solving problems*
6. Talks optimistically about the future*
7. Instills pride in me for being associated with him/her*

8. Discusses in specific terms who is responsible for achieving performance targets

9. Talks enthusiastically about what needs to be accomplished*

10. Specifies the importance of having a strong sense of purpose*

11. Spends time teaching and coaching*

12. Makes clear what one can expect to receive when performance goals are achieved

13. Goes beyond self-interest for the good of the group*

14. Treats me as an individual rather than just as a member of a group*

15. Acts in ways that build my respect*

16. Concentrates his/her full attention on dealing with mistakes, complaints, and failures

17. Considers the moral and ethical consequences of decisions*

18. Keeps track of all mistakes

19. Displays a sense of power and influence*

20. Articulates a compelling vision of the future*

21. Directs my attention toward failures to meet standards

22. Considers me as having different needs, abilities, and aspirations from others*

23. Gets me to look at problems from many different angles*

24. Helps me to develop my strengths*

25. Suggests new ways of looking at how to complete assignments*

26. Emphasizes the importance of having a collective sense of mission*

27. Expresses satisfaction when I meet expectations

28. Expresses confidence that goals will be achieved*

*denotes Transformational Leadership characteristic

Bass, B.M., & Avolio, B.J. (1990). *Transformational Leadership Development: Manual for the Multifactor Leadership Questionnaire*. Palo Alto, CA: Consulting Psychologists Press, Inc.

APPENDIX F

JOB DIAGNOSTIC SURVEY

General Satisfaction Scale

1. Generally speaking, I am very satisfied with this job.

2. I frequently think of quitting this job.*

3. I am generally satisfied with the kind of work I do in this job.

4. Most people on this job are very satisfied with the job.

5. People on this job often think of quitting.*

*denotes reverse coding

Hackman, R.J. & Oldham, G.R. (1975). Development of the Job Diagnostic Survey. *Journal of Applied Psychology*, 60 (2), 159-170.

APPENDIX G

ORAGNIZATIONAL COMMITMENT QUESTIONNAIRE

Organizational Commitment Questionnaire

Please rate the degree to which you agree with the following descriptive statements regarding your current job. For each statement, please indicate much you agree or disagree with each statement pertaining to your current job. Mark the appropriate rating that corresponds to your judgment.

The rating scale is as follows:

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

Affective Commitment Scale Items

1. I would be very happy to spend the rest of my career in this organization.
2. I really feel as if this organization's problems are my own.
3. I do not feel like part of the family at my organization.*
4. I do not feel emotionally attached to this organization.*
5. This organization has a great deal of personal meaning for me.
6. I do not feel a strong sense of belonging to my organization.*

Continuance Commitment Scale Items

1. It would be very hard for me to leave my organization right now, even if I wanted to.
2. Too much of my life would be disrupted if I decided I wanted to leave my organization right now.

3. Right now, staying with my organization is a matter of necessity as much as desire.
4. I feel that I have too few options to consider leaving this organization.
5. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.
6. One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice; another organization may not match the overall benefits I have here.

Normative Commitment Scale Items

1. I do not feel any obligation to remain with my current employer.*
2. Even if it were to my advantage, I do not feel it would be right to leave my organization now.
3. I would feel guilty if I left my organization now.
4. This organization deserves my loyalty.
5. I would not leave my organization right now because I have a sense of obligation to the people in it.
6. I owe a great deal to my organization.

*denotes reverse coding

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, *1*(1), 61

APPENDIX H

INTRINSIC MOTIVATION SCALE

Intrinsic Motivation Scale

Please rate the degree to which you agree with the following descriptive statements regarding your current job. For each statement, please indicate much you agree or disagree with each statement pertaining to your current job. Mark the appropriate rating that corresponds to your judgment.

The rating scale is as follows:

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

1. My job lets me have the chance to be somebody.
2. My job gives me a feeling of accomplishment.
3. My job lets me make full use of my abilities.
4. My job is just another way to make a living.*
5. My job allows me to have control over my life.
6. My job is exciting and challenging.
7. My job allows me to grow and develop as a person.

*denotes reverse coding

Thakor, M.V. (1994). "Innate: Development of a new Intrinsic Motivation Measure Using Confirmatory Factor Analytic Methods," in *AP – Asia Pacific Advances in Consumer Research Volume 1,* eds. Joseph A. Cote and Siew Meng Leong, Provo, UT: Association for Consumer Research, 116-121.

APPENDIX I

INSTITUTIONAL REVIEW BOARD

Human Subjects Review Board
Department of Psychology
California State University,
San Bernardino

PI:	Hilken, Colby and Gilbert, Janelle
From:	John P. Clapper
Project Title:	The Role of Broaden-and-Build Schema and Motivation in the Relationship between Transformational Leadership and Subordinate Outcomes
Project ID:	H-15WI-05
Date:	1/26/15

Disposition: Administrative Review

Your IRB proposal is approved. This approval is valid until 1/26/16.

Good luck with your research!



John P. Clapper, Co-Chair
Psychology IRB Sub-Committee

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