

11-17-2009

True North or Traveled Terrain? An Empirical Investigation of Authentic Leadership

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True North or Traveled Terrain?
An Empirical Investigation of Authentic Leadership

by

Matthew D. Tuttle

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Psychology
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Date of Approval:
November 17, 2009

Keywords: Authentic-Transformational, Transformational, Transactional, Follower
Motivations, Follower Behavior, Structural Equation Modeling

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To my Grandfather –

One of the remaining members of a generation of authentic leaders.

Acknowledgments

I would like to thank Darryl Scott, my boss and mentor, who took me under his wing and inspired me to research authentic leadership. I would also like to thank my cohort – Anna, Ashley, Burcu, Matt, and Rob – for their support and friendship through grad school, and for helping me see the light at the end of the tunnel. Hey, we all graduated! A big thank you to my committee – Drs. Johnson, Borman, Stark, Vandello, and Michaels – for their guidance, especially Russ Johnson, who, despite the challenges of being a new professor with a large and growing number of students to advise, and having to work with me remotely from Atlanta, provided the support I needed to complete my dissertation. I would like to thank my Dad, my friends at The Home Depot, and the creators of SONA, Facebook, and Linked-In for helping me collect multiple rounds of data. I probably could have done it without you, but it would have taken a lot longer! Finally, a sincere thank you to my family, my girlfriend Natalie, and Natalie's family for their constant support and encouragement throughout the dissertation process. This is something that I definitely could not have done without.

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ABSTRACT

Authentic leadership is a new concept that is gaining both popularity and notoriety in the leadership literature. It is argued as a positive form of leadership that goes beyond traditional leadership styles in order to influence followers through genuine, ethical behavior. However, as a concept in its infancy, authentic leadership has yet to receive much empirical attention, and many researchers are skeptical of its value in what is seen as a saturated domain of leadership styles. This study offers a comprehensive approach to addressing this need. A new measure for authentic leadership was developed and validated through pilot testing. Through additional analyses using this new measure, it was discovered that authentic and transformational leadership were not empirically distinct. However, by combining these two measures into an authentic-transformational leadership construct, it was still possible to examine the effect of greater amounts of authenticity in the leadership role. It was found that authentic-transformational leadership was directly related to a number of employee attitudes, and these, in turn, were related to positive employee behaviors. Results of this study are discussed both in terms of future research in the area of authentic-transformational leadership as well as its impact on organizational effectiveness.

Chapter One

Introduction and Literature Review

Authentic leadership is a new concept that is gaining both popularity and notoriety in the leadership literature. Although a concrete definition is yet to be accepted (Cooper, Scandura, & Schriesheim, 2005), Avolio, Luthans, and Walumbwa (2004) describe authentic leaders as “those who are deeply aware of how they think and behave and are perceived by others as being aware of their own and others’ values/moral perspectives, knowledge, and strengths; aware of the context in which they operate; and who are confident, hopeful, optimistic, resilient, and of high moral character” (p. 4). Authentic leaders have also been described as credible, transparent, respectable, trustworthy, positive, ethical, committed, open, and direct (Avolio, Gardner, Walumbwa, Luthans, & May, 2004). In short, authentic leadership is argued as a positive form of leadership (Avolio & Gardner, 2005) that goes beyond traditional leadership styles in order to influence followers through genuine, ethical behavior. In a time of increasing corporate scandals, political deception, and heightened national security, it is not surprising that authenticity in leadership is openly welcomed.

Although some critics are skeptical of its value, authentic leadership is argued as more than just a feel-good, blanket response to the moral ineptitudes of certain leaders. That is, the concept of authentic leadership holds promise for bottom-line organizational success as well. For example, Bill George, CEO of a leading medical technology company, has written books that detail the principles of authentic leadership and how to

tie them in to personal and company goals. In his latest book (George, 2007), he describes his research and personal interviews with 125 top leaders and the effect that their leadership style has had on the bottom line. These interviews form a picture of what it takes to develop authentic leaders and authentic companies, and the benefits of doing so, both in terms of workplace culture and organizational success.

As a concept in its infancy, authentic leadership has yet to receive much empirical attention. What research does exist shows a link between perceptions of authentic leadership and employee job satisfaction, work happiness, and organizational commitment (Jensen & Luthans, 2006). This is a good start; but there is a clear need to expand on this research to test the relationship between authentic leadership and a wide variety of outcomes. The proposed study offers a comprehensive approach to addressing this need.

There are three major goals of this study. The first is to address current deficiencies in the authentic leadership literature. As previously mentioned, there is no clear definition for authentic leadership. Consequently, there is no rigorously-validated scale for its measurement. This will be addressed by developing and testing a measure that is grounded in current theorizing on authentic leadership. The second goal is to examine the extent to which authentic leadership differs from other popular forms of leadership (e.g., transactional, transformational), as this has not been tested empirically. As pointed out by Cooper, Scandura, and Schriesheim (2005), it is important to establish the uniqueness of this concept before discussing how it can be trained or developed. Finally, the effectiveness of authentic leadership will be examined using a variety of

organizational outcomes in order to assess its value in the workplace. Results of this study will provide both a solid foundation for future research in authentic leadership and a glimpse of its impact on organizational effectiveness.

Brief History of Leadership Theory

Leadership, in its broadest sense, is the influence that one person, the leader, has on others to behave in a certain way (Yukl, 1998). Effective leaders provide strategic direction for the group or organization, motivate and coach poor performers, enforce and interpret organizational policies, and secure the necessary resources for work group or organizational functioning (Jex, 2002). Plainly stated, the influence of a leader is very important, if not vital, to organizational success. What it takes to have such an influence has been the subject of scholarly debate for centuries, and has been given a great deal of empirical attention in more recent times. Different approaches to the study of leadership have evolved throughout the last half century, with each new approach building off of its predecessors. In general, leadership theory has moved from a focus on the traits of a leader, to the behaviors of the leader, to a situational approach, where the most effective traits and behaviors depend on the situation the leader is in (Kenny & Zaccaro, 1983).

Most early leadership researchers argued that leaders who were effective had different inherent traits than those who were ineffective. The idea was then to identify the traits that effective leaders possessed, and place into leadership positions those individuals who displayed these traits. However, because much of this early research did not have very strong theoretical grounding, a definitive profile of the “effective leader” was never fully reached. Researchers generally concluded that the effectiveness of a

leader depended on a number of variables, and the trait approach lost much of its influence during the 1940s and 50s (Jex, 2002). Recent research has shown a bit of a comeback in this approach, due to the use of more theoretically plausible traits (e.g., Yukl & Van Fleet, 1992). However, trait-based researchers have yet to address fundamental questions about the practical application of their research, such as whether or not traits can be learned and developed or used only for selection (Jex, 2002). While these questions do remain, the trait-based approach has added a great deal in advancing the development of leadership theory.

Behavior-based research further advanced our understanding of the leadership process by narrowing down leader traits or characteristics into specific behaviors that can be measured and trained. Some of the more influential research of this era came from The Ohio State leadership studies (Fleishman, Harris, & Burt, 1955). These researchers proposed a taxonomy where leader behaviors could be broken down into two basic dimensions - initiating structure and consideration. Other researchers (e.g., Likert, 1961; Blake & Mouton, 1964) quickly followed suit with similar behavioral dichotomies. However, while there was general agreement among researchers that two basic dimensions existed, there was a lack of agreement on the nature of the dimensions. In addition, researchers adopting the behavior-based approach ran into the same problem as those from earlier trait-based approaches - there was no universal set of behaviors that were effective for leaders in all situations. Thus, a common conclusion from trait-based and behavior-based research was that effective leadership depended on the situation that the leader was in, and the leader must change his or her behavior according to a number

of variables. These conclusions spawned a new stream of research that has become the dominant approach in modern leadership theory.

The contingency or situational approach is based on the idea that the most effective traits or behaviors that a leader could possess or enact depend on the characteristics of the situation. It is the leader's task to study the dynamics of the situation and determine which behaviors would work best. Most leadership theories proposed in the last 30 years are contingency theories (Jex, 2002). However, while the basic premise of this approach has been widely accepted, there is less agreement on the relative importance of its components. Some theories (e.g., Fiedler, 1967) propose that a certain behavioral style should be enacted when the situation calls for it, while other theories (e.g., House, 1971) argue that leaders are entirely capable of adapting their behavior to a given situation. It is also not entirely clear which behaviors the leaders should change once the decision to act has been made. Despite these shortcomings, the contingency approach is still considered the dominant paradigm in the study of leadership today.

Full Range of Leadership Model

House and Aditya (1997) argued that one of the drawbacks in leadership research has been an oversimplification of the underlying factors for the conceptualization and measurement of leadership. In response to this argument, Antonakis, Avolio, and Sivasubramaniam (2003) tested the external validity of Avolio and Bass's (1991) Full Range of Leadership model. This model consists of nine distinct leadership factors - five transformational, three transactional, and a nontransactional laissez-faire style of leadership. Each is described below.

Transformational leadership. Arguably the most popular leadership style in modern-day research and practice is transformational leadership (Burns, 1978). The idea behind this leadership style is that certain leader behaviors and traits can be used to not only influence the subordinate, but inspire them to go above what they thought was possible.

The unique components of transformational leadership have been analyzed by many researchers, mostly through the use of factor analysis. Avolio, Bass, and Jung (1999) argued that four factors make transformational leadership distinct. The first, *idealized influence*, refers to the fact that these leaders are well-respected, trusted, and have followers who identify with and wish to emulate them. This factor is commonly split into two subfactors (e.g., Avolio & Bass, 1991). *Idealized influence- attributed* is the degree to which the leader displays charisma, confidence, and a focus on higher-order ethics and ideals. *Idealized influence- behavior* refers to the actions of the leader, and whether they are charismatic and centered on their beliefs, values, and sense of a mission. The second factor, *inspirational motivation*, refers to the leader's ability to motivate their followers by providing challenge and meaning to their work. The third, *intellectual stimulation*, refers to promoting follower innovation through challenging assumptions, and downplaying their mistakes. Finally, *individualized consideration* refers to the ability of the leader to act as a coach or mentor.

Transactional leadership. Transactional leadership has also been promoted in the past, but has been largely replaced by other theories (i.e., transformational) that are shown as more effective. Bass (1985) described transactional leaders as preferring risk

avoidance behaviors, operating strictly within the existing system or culture, paying a great deal of attention to time processes and efficiency, and generally preferring process over substance as a means to maintain control. There are three dimensions commonly associated with transactional leadership. *Contingent reward* is the degree to which the leader organizes constructive exchanges with the follower. They clarify their expectations and establish the level of reward once those expectations are met. *Management by exception*, in general, is the degree to which a leader takes corrective action from the results of leader-follower transactions. This dimension is commonly broken down into two sub-dimensions. Leaders who engage in *active management by exception* track follower behavior, anticipate problems, and take preventative actions before the follower's behavior becomes detrimental. In contrast, leaders who engage in *passive management by exception* generally become disengaged until a problem has occurred, and then offer guidance on what "should have been done."

Laissez-faire leadership. The final set of behaviors proposed by Avolio and Bass (1991) are those of laissez-faire leadership. The authors defined this as the absence of any sort of a transaction, where the leader avoids making decisions, does not use his/her provided authority, and generally fails in responsibilities. It is argued that laissez-faire is an "active" form of leadership to the extent that the leader "chooses" to avoid taking the necessary action.

Research has generally been supportive of the Full Range of Leadership model. For example, Antonakis et al. (2003) found some support for the validity of the model when contextual factors are accounted for, using scales from Bass and Avolio's

Multifactor Leadership Questionnaire (MLQ-5X). They argued that by retaining all nine components in the model, practitioners are better able to coach leaders on which specific behaviors they should focus on to develop their leadership potential. For example, telling a leader that he or she should engage in more intellectual stimulation with his/her followers is much better than simply stating that the leader needs to “increase his or her transformational behavior.”

In addition to the identification of specific behaviors within the Full Range of Leadership model, some researchers have placed these behaviors on a continuum. The argument is then made that the leader will adopt different behaviors as the leader’s needs change. For example, Kuhnert and Lewis (1987) proposed that leaders transition from a transactional to a transformational style with time in the leadership role. They focused on three stages. In the first stage, labeled *Imperial/Lower-order Transactional*, the leader is motivated by his/her immediate personal goals and agendas. Once these have been established, the leader transitions to the *Interpersonal/Higher-order Transactional* stage where interpersonal connections and mutual obligations are used to further advance the leader’s goals. Once this has been accomplished, the leader moves on to the *Institutional/Transformational* stage. In this final stage, the leader operates from his or her personal standards and value system in order to achieve long-term personal and organizational goals. Thus, according to this line of reasoning, the goal of any leader should be to become more transformational in their leadership style through time. However, it is not always the case that transformational leadership results in positive outcomes for all stakeholders.

The Ethics of Transformational Leadership

Several theorists have questioned the morality of the transformational leadership style. Some have even categorized transformational leaders according to their behavioral integrity. For example, Bass and Steidlmeier (1999) distinguished between pseudo-transformational leaders and authentic transformational leaders, and compared the two using the four components of transformational leadership. For idealized influence, they argued that differences lie in the values for which the leader is idealized by the follower, and how the leader uses his or her influence once it is gained. While an authentic transformational leader calls for everyone to work together to accomplish a goal, and therefore his or her values are seen as being in accordance with the good of the group, a pseudo-transformational leader is likely to promote an “us versus them” (in-group/out-group) mentality, with the possibility of sacrificing group cohesiveness. It is also argued that once they have become idealized, pseudo-transformational leaders will use their position (i.e., influence) for their own personal gain instead of developing followers.

The authors also point out differences in inspirational motivation. They argue that the inspirational appeals of authentic transformational leaders focus on the positives of the follower—harmonized relationships, charity, and good works—while pseudo-transformational leaders are more likely to focus on conspiracies, unreal dangers, insecurities, and excuses to get what they want. While authentic transformational leaders believe and act according to the good of the group in order to inspire and motivate followers, pseudo-transformational leaders give the outward appearance of the same behavior, but are privately concerned about the good they can achieve for themselves.

The third component the authors use for comparison is intellectual stimulation. They argue that pseudo-transformational leaders place more importance on their authority than on logic when making and enacting decisions. They also take credit for the successful ideas of others, while using them as scapegoats when ideas fail. Furthermore, whereas authentic transformational leaders gain follower support through the merits of their arguments, pseudo-transformational leaders set and control the agenda in order to manipulate the values of importance to the follower.

The final component that is argued to be different between these two types of transformational leaders is individualized consideration. The authors state that while authentic transformational leaders are genuinely concerned about developing their followers into leaders, pseudo-transformational leaders are more concerned about maintaining the dependence of their followers, expecting blind obedience, and trying to enhance their status by maintaining distance between themselves and their followers. While the authentic transformational leader is concerned about helping followers become more competent in anticipation of the leader's own succession, an inauthentic, pseudo-transformational counterpart seeks to maintain a parent-child relationship with his or her followers.

Building upon the work of Bass and Steidlmeier (1999), Price (2003) developed a more sufficient response to the ethical concerns of transformational leadership by further defining authentic and pseudo-transformational leadership. Using theories proposed by Aristotle (1985), Price argued for three different types of pseudo-transformational leadership. The first, labeled *incontinent pseudo-transformational leadership*, is when

leaders have a small amount of commitment to altruistic values, but still act against them in order to satisfy their own self-interests. These leaders can be motivated by the values reflected in the interests of others; however, these values are usually insufficient in the face of a strong temptation to act on their own self-interests. The second version, labeled *base pseudo-transformational leadership*, is when leaders are committed to their egoistic values, and their actions reflect these values. The base pseudo-transformational leader's actions are true to self, and therefore authentic; however, he or she is true to an inner-self that is not in line with group or organizational goals. A third version, labeled *opportunistic pseudo-transformational leadership*, is when leaders sometimes act in ways that are in line with the interests of others, however, this alignment has the ultimate goal of advancing the leader's own interests. Price (2003) points out that all three forms of pseudo-transformational leadership assume a volitional account of ethical failures of leadership. That is, these leaders recognize what is the moral thing to do, but nevertheless engage in unethical behavior for their own self-interests. Opportunistics will care about justice or equality, for example, only when it will ultimately satisfy their own self-interests, base leaders will not care about these values at all, and incontinents will simply care too little about these values.

Going beyond the specific differences between authentic transformational leaders and pseudo-transformational leaders proposed by Bass and Steidlmeier (1999) and Price (2003), other researchers have criticized transformational leadership on more general ethical terms. For example, some authors plainly state that transformational leadership lends itself to "amoral puffery," or a false conceptualization of an idyllic leader, through

the use of impression management (e.g., Snyder, 1987). Others believe that it manipulates followers into thinking that the sacrifices they are making will ultimately lead to positive outcomes, while in actuality their actions go against their own best interests (Stevens, D'Intino, & Victor, 1995). From an organizational standpoint, some believe that it goes against the tenets of organizational learning and development, such as participative leadership and decision-making, equality, and group consensus initiatives (e.g., McKendall, 1993). Finally, from a broader societal perspective, it is argued that transformational leadership lacks the checks and balances needed from a diversity of interests, influences, and power that would prevent a dictatorship or the exploitation of a minority group by the majority (e.g., Keeley, 1995).

In summary, transformational leadership is mostly seen as a highly effective form of leadership, and one that should be desired and developed throughout the leader's career. However, due to the nature of this particular form of leadership—"transforming" the follower's thoughts and actions—it is easy to see where the leader can become manipulative and unethical if his or her motives are not aligned with the good of the group. Efforts have been made to separate the positive characteristics of transformational leaders from the negative characteristics, but these dimensions are theoretically unclear and empirically unexamined. Thus, there remains a need to define what it means to be an ethical, positive leader. This argument has recently shifted from the domain of transformational leadership into discussions of a new leadership construct called authentic leadership.

Authentic Leadership

Using their combined academic backgrounds on leadership and positive psychology, Fred Luthans and Bruce Avolio (2003) looked to develop a new, positive approach to leadership that addresses the need for true leaders in today's society, as well as the ethical issues of previous leadership styles. They called this new approach *authentic leadership*. They proposed that those who own their personal experiences and act in accordance with their true selves model "the type of positive leadership needed in contemporary times, where the environment is dramatically changing, where the rules that have guided how we operate no longer work, and where the best leaders will be transparent with their intentions, having a seamless link between their espoused values, actions, and behaviors" (p. 242). It is argued that without authentic leadership, there is a high risk of egocentric control and the exploitation of one group for the benefit of another. Furthermore, it is argued that the exhibited behavior of authentic leaders serves as a model and a source of inspiration for followers to develop themselves into leaders.

Although there is yet to be agreement on a universal definition, there is agreement on what constitutes many of the core elements of authentic leadership. In a special issue of *The Leadership Quarterly* dedicated to the advancement of authentic leadership theory, Avolio and Gardner (2005) reviewed current definitions and expanded on the work of Kernis (2003) to arrive at five theoretical dimensions of authentic leadership: positive moral perspective, self-awareness, balanced processing, relational transparency, and authentic behavior.

Positive moral perspective. This dimension refers to the fact that authentic leaders draw upon a reserve of positive personal resources (e.g., ethics, moral capacity, confidence, optimism) in order to make decisions where these factors come into play. Although the concept of authentic leadership itself is in the early stages of development, this dimension has already begun to draw its fair share of controversy. In his original work on the nature of “optimal” self-esteem, Kernis (2003) argued that an individual’s level of “authenticity” is a key component in attaining genuine, true, stable, and high self-esteem. Much of what is now defined as authentic leadership has its roots in Kernis’ concept of authenticity. However, a positive moral perspective dimension was never mentioned in his research. Furthermore, this dimension is not seen as necessary for authenticity by some researchers (e.g., Cooper et al., 2005; Shamir & Eilam, 2005; Sparrowe, 2005), with the argument that the use of this dimension may “dilute” the descriptor *authentic*, making it more difficult to operationalize authentic leadership in subsequent research. However, other researchers (e.g., Luthans & Avolio, 2003; May, Chan, Hodges, & Avolio, 2003) assert that this moral component is inherent in authentic leadership and its development. Avolio and Gardner (2005) even go so far as to say that the inclusion of a positive moral perspective is “*crucial* to the emerging work on authentic leadership development [italics added]” (p. 324).

It could be argued that much of the current controversy has to do with the difference between the concept of “authenticity” as an individual, and the leader’s ability to engage in “authentic leadership.” Individuals can be authentic, as defined by Kernis (2003), without having a positive moral perspective. That is, they can be aware of whom

they are, accepting of their positive and negative aspects, act according to their true selves, and be open and truthful in close relationships. However, leaders, especially positive leaders, are responsible not only for themselves, but also for the welfare of others. Because of this responsibility, it is essential that the “true self” that the leader is operating from is also grounded in a positive moral perspective—where actions are dictated by moral capacity, efficacy, courage, and resiliency (i.e., May et al., 2003). Thus, authentic leadership is a concept that represents not only the individual authenticity of the leader, but an additional dimension where the leader’s actions are grounded in positive virtues.

Self-awareness. The second dimension is the idea that leaders are keenly aware of who they are and take the time to reflect upon their thoughts, values, emotions, and goals. According to Silvia and Duval (2001), this occurs when individuals are cognizant of their own existence, and what constitutes that existence for the context in which they operate over time. Avolio and Gardner (2005) argue that leader self-awareness is not a destination point, but an emerging process where one continually comes to understand his or her unique talents, strengths, sense of purpose, core values, desires, and beliefs. Although authentic leadership theory is in its beginning stages, a good deal of attention has been paid to this particular dimension. For example, Gardner, Avolio, Luthans, May, and Walumbwa (2005) identify four elements of self-awareness that they argue are especially relevant to the development of authentic leadership. The first is the leader’s *values*. They argue that while values are learned through socialization processes and serve to benefit groups and larger social units, once they are internalized, they become an

integral part of the self. Thus, the leader's self-awareness regarding his or her values becomes a key component to authenticity. The second element is the leader's cognitions regarding his or her *identity*. According to the authors, leader identification is the process through which individuals incorporate the role of leader into their interpersonal identities (i.e., their identity in relation to others). Authentic leaders see themselves both as leaders and as positive role models. The third element of self-awareness is in the *emotions* of the leader. Based largely on the tenets of emotional intelligence (Goleman, 1995), they argue that authentic leaders are in touch with their emotions and their effects on themselves and others, and that this recognition assists authentic leaders in making value-based decisions. Finally, the leader's *motives* or *goals* are argued as part of their self-awareness. The authors argue that, as part of their motives and goals, authentic leaders will seek self-verification, self-improvement, and greater congruence between their actual and ideal selves.

Balanced processing. The third dimension of authentic leadership has to do with the way the leader handles self-relevant information. While other leaders may belittle or entirely ignore constructive feedback, authentic leaders balance both positive and negative personal feedback, and see both types of information as opportunities for development. Kernis (2003) explains that this dimension involves not denying, distorting, exaggerating, or ignoring private knowledge, internal experiences, and externally based evaluative information. Instead, it involves objectivity and acceptance of one's positive and negative aspects, attributes, and qualities.

Relational transparency. The fourth dimension is a general openness and trust in relationships. Authentic leaders share information, personal and otherwise, with their followers, and promote the same in return. Labeling this dimension “relational authenticity,” Kernis (2003) explains that it involves endorsing the importance of close others to see the real you, both good and bad. Toward that end, authentic relations involve a selective process of self-disclosure and the development of mutual intimacy and trust. In short, relational authenticity means being genuine and not “fake” in one’s relationships with close others.

Authentic behavior. The final dimension involves the leader acting upon his or her expressed beliefs and commitments. The idea here is that authentic leaders are driven by their own moral compass instead of external motivations such as power, acceptance, or financial gain. While researchers propose different sources for the development of the leader’s “moral compass” (e.g., Gardner et al., 2005; Ilies, Morgeson, & Nahrgang, 2005), the important thing to keep in mind is that behaviors are driven by intrinsic values as opposed to external rewards. This is arguably the most intuitive dimension for authentic leadership, and what most people would constitute individual authenticity.

To better understand authentic leadership and to build a foundation for testable hypotheses, authors have begun to formulate theoretical models of authentic leadership development. For example, Gardner et al. (2005) propose a model in which self-awareness and self-regulation are central elements in authentic leadership. Additionally, the authors argue that the leader’s personal history and trigger events serve as antecedents to authentic leadership, and that an inclusive, ethical, caring, and strength-based

organizational climate moderates the effects of the leader on his or her followers. Lastly, they propose that, through positive modeling, the authentic leader will develop follower trust, engagement, workplace well-being and veritable, sustainable performance. Ilies et al. (2005) propose a second model of authentic leadership. In their view, the leader's eudaemonic well-being (an Aristotelian concept encompassing personal expressiveness, self-realization/development, flow experiences, and self-efficacy/self-esteem) serves as an antecedent to authentic leadership. It is then argued that authentic leaders will develop eudaemonic well-being in their followers through (1) personal and organizational identification, (2) positive emotions contagion, (3) positive behavioral modeling, (4) supporting self-determination, and (5) positive social exchanges. These models serve as a foundation for further development of the theory of authentic leadership. It is important to note, however, that although these models help clarify the processes and outcomes of authentic leadership, they are only theoretical in nature and have yet to be tested empirically.

Discriminant Validity of Authentic Leadership

Although it has thus far received some favorable press, authentic leadership does not sit well with all researchers. For example, Cooper et al. (2005) warn about the dangers of getting caught up in this promising new construct before it has been adequately researched. Specifically, they argue that researchers must: (1) agree upon a definition and a solid measure of the construct, (2) determine its discriminant validity, and (3) identify relevant outcomes before (4) deciding whether or not authentic leadership can and should be trained. The authors' first point has been addressed through

different streams of research. Recall Avolio and Gardner's (2005) research highlighted five dimensions for authentic leadership. These five dimensions serve as both a definition of authentic leadership and a solid foundation for future research in the area. As noted by the authors, "we have reviewed and extended an emerging perspective on authentic leadership development and performance that helps to explain the underlying processes and factors by which authentic leaders and their followers can positively impact sustained performance" (p. 333).

In light of this work, a group of researchers (Endrissat, Muller, & Kaudela-Baum, 2007) recently conducted a large qualitative study in search of the meaning of leadership, with revealing results. They pointed out that, "while the original aim of the study was to explore the subjective meaning practitioners apply to 'leadership,' authenticity emerged early from the interviews as a central issue. In other words, the topics of authenticity and integrity came to us rather unexpectedly, and it was only after they became evident that we directed our attention to them and started to review the existing literature" (p. 208). The results of their study add further support for the dimensions proposed by Avolio and Gardner (2005). In conducting interviews with leaders from a variety of industries and organization sizes ($N = 26$), the authors found a great deal of overlap between what is seen as "leadership" in its most basic form, and what has been defined as authentic leadership.

The authors found five separate categories that reflect the common understanding of leadership for those interviewed. The first was labeled "one's own position." It was stated that many interviewees identified the ability to "clearly and independently state

one's position in terms of having a mind of one's own or having a clear individual point of view" as a central requirement of leadership. This is very similar to the concept of self-awareness (Avolio & Gardner, 2005), in that both concepts point to the need for the individual to know who they are and how they stand on different issues. The second category was labeled "binding commitment," and explained as consistently putting into practice one's own, unambiguous position, or "walking the talk." Recall that Avolio and Gardner (2005) define authentic behavior as acting in accordance with one's beliefs and commitments. Thus, the second category is very similar to the authentic behavior dimension of authentic leadership. The third category that the authors found was labeled "relationship to the business" and explained as the need for the leader to have a personal and emotional relationship to the organization's purpose and product. Although not entirely overlapping, this concept is similar to Avolio et al.'s (2005) self-awareness sub-dimensions of identity and emotions, where the leader identifies him or her self as a leader and positive role model and also shows emotional awareness. The fourth category, labeled "social proximity," highlights the need for the leader to remain approachable and not lose touch with "the base" of employees. This is closely linked with Kernis' (2003) idea of relational authenticity and Avolio and Gardner's (2005) concept of relational transparency, both arguing for the importance of openness and trust in relationships at work. Finally, Endrissat et al. (2007) state that at the center of leadership understanding is "authenticity: to be oneself". They say that leadership is seen as successful if the leader is true to others as well as themselves, and if the leader acts according to his or her beliefs.

In essence, this final category is inclusive of the other four categories, and reflects what “is a necessity in order to be perceived as a leader” (p. 212).

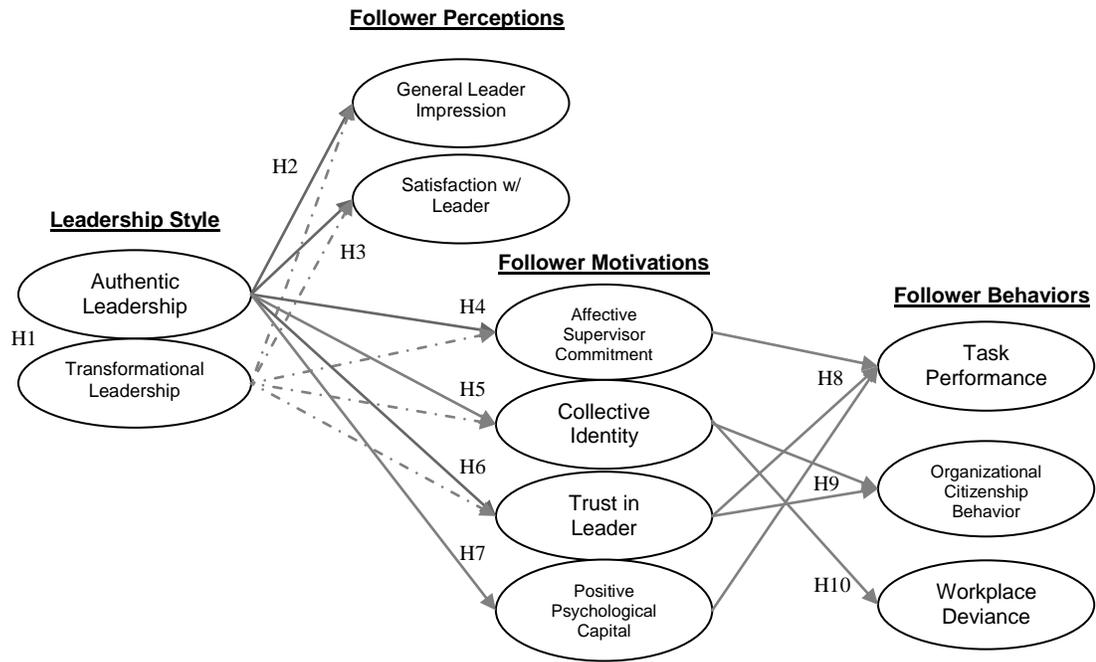
These results support further development of authentic leadership for multiple reasons. First, the simple fact that authenticity emerged “early” as a central concept in this qualitative research offers further support for its importance in today’s leadership domain, and thus the importance of studying it empirically. Second, as Cooper et al. (2005) point out, qualitative is better than quantitative research when there is little existing research on which to base hypotheses. Third, from these results, one can see heavy overlap in what is thought of as leadership in a modern and general form, and what is being defined as authentic leadership in the literature. In the preliminary stages of authentic leadership theory, it is good to know that theoretical definitions of the construct are now being supported by qualitative research.

Cooper et al.’s (2005) second point alludes to a current debate regarding the discriminant validity of authentic leadership when compared to existing forms of leadership. Specifically, researchers argue that this new concept has heavy overlap with the existing dimensions of transformational leadership. Because of this, they do not see the value in pursuing this new concept, and thereby creating new literature in what is seen as an already saturated leadership domain. However, by dismissing authentic leadership entirely, these researchers may be missing a key opportunity to see which leadership factors are most effective in driving positive employee behavior. That is, most proponents of authentic leadership (e.g., Avolio & Gardner, 2005) admit that there is high overlap with existing constructs, but argue that this new construct is actually a “root construct”

comprised of the necessary elements of leadership which drive employee behavior. Thus, there is a need to separate the effects of authentic leadership from other forms of leadership (e.g., transformational) to see if this new construct is truly a valuable addition to the leadership literature.

A model of the proposed relationships between authentic and transformational leadership is presented on the left side of Figure 1. As can be seen, it is proposed that these are two independent styles of leadership. As pointed out by Avolio and Gardner (2005), “there should be convergent validity between . . . transformational and authentic leadership, but it is important that we build the case for discriminant validity as well” (p. 329). In differentiating between the two styles, these authors state that while transformational leaders may use their own self-awareness as a primary means of influence (as authentic leaders do), they may also be able to transform others through powerful visions, stimulating ideas, or by uplifting the needs of followers. In other words, they argue that transformational leadership may include authentic leadership behaviors, but does not have to in order to be effective. Luthans and Avolio (2003), on the other hand, state that, “authentic leadership includes, but . . . goes beyond transformational leadership” (p. 246). Thus, these authors both argue for some degree of overlap between these two constructs, however, this level of convergence is not well understood and has not been tested empirically. Phase I of the current study addresses this gap in current research by examining the degree of convergent and discriminant validity between authentic leadership and other related leadership forms, namely transformational and transactional leadership.

Figure 1. Proposed model of the effects of various leadership styles on organizational criteria.



Taking more of a macro-level approach, Cooper et al. (2005) state that, “if researchers are able to empirically discriminate authentic leadership from other constructs, they can continue to move forward with their research efforts and development initiatives” (p. 481). In essence, they are arguing for direct comparisons of authentic leadership with other leadership constructs. Other researchers have called for similar comparisons (e.g., Avolio et al., 2004; Luthans & Avolio, 2003; May et al., 2003; Wood, 2008). As previously discussed, transformational and transactional leadership are two of the most empirically examined constructs in modern leadership literature. Therefore, comparing these two leadership constructs to authentic leadership would not only help clarify the nature of this new construct, but would also address a clear gap in

the leadership literature. In the current study, the following hypothesis regarding these three leadership constructs was proposed:

Hypothesis 1: A measure of authentic leadership is distinguishable from measures of transformational and transactional leadership when factor analyzed.

Outcomes Associated with Effective Leadership

Leader behavior can affect the follower in a variety of ways, both positively and negatively. One of the main objectives for the leader is to influence follower behavior toward organizational goals. However, this effect is neither entirely direct nor immediate. That is, while leaders can ultimately influence the actions of their followers, it is only through a series of factors that this effect takes place. Researchers have called for increased attention to these “process variables” that drive follower behavior (e.g., Shamir, House, & Arthur, 1993), and it is a goal of this study to address this call. The following sections describe perceptions and motivations on the part of the follower that are influenced by the leader. Later sections discuss the effect of follower motivations on their behavior.

Follower Perceptions

General leader impression. In order to be an effective leader, one must first be seen as a leader by one’s followers. Although this seems fairly intuitive, this topic has been given little empirical attention to date. As described above, theories about what makes an individual a leader have been the topic of debate for centuries. Throughout this time, it has become apparent that what was once the norm for the ideal leader, for example the “Great Man” theory, no longer applies in the modern business world.

However, the modern-day impression of a leader has not been examined to any great extent. Research by Endrissat et al. (2007) helps shed some light on the matter. As discussed above, these authors examined the current conceptualization of a “leader” using a qualitative design. They found heavy overlap between general components of leadership, as described by participants, and the dimensions of authentic leadership proposed by Avolio and Gardner (2005). Thus, what is thought of as “leadership” in its most general sense in today’s world may be more closely related to authentic leadership than to other leadership styles. Therefore, the following hypothesis is proposed:

Hypothesis 2: (a) Authentic leadership is positively related to followers’ general leader impression, and (b) this relationship is stronger than the one between transformational leadership and general leader impression.

Satisfaction with the leader. Closely related to the follower’s perception of leadership is the follower’s satisfaction with the leader’s behavior. Although not discussed much in the literature, satisfaction with leadership may play a large role in employee behavior. It is therefore important to study which leader behaviors are more likely to elicit higher levels of satisfaction from the follower. Researchers addressing this issue have arrived at similar results. For example, Judge, Piccolo, and Ilies (2004) conducted a meta-analysis on behaviors from The Ohio State leadership studies (i.e., consideration and initiating structure) and found that they both had significant relationships with follower satisfaction (a composite of employee satisfaction with leadership and job satisfaction). Although they were both significant, consideration (.48) had a stronger relationship than initiating structure (.29), suggesting that employee-centered behaviors have a stronger relationship with follower satisfaction than job-

centered behaviors. Recall that transactional leaders are more concerned with process factors and abiding by set rules that dictate their actions with followers, and that transformational leaders show greater levels of care (i.e., individualized consideration) for their followers. However, as pointed out by Bass and Steidlmeier (1999), transformational leaders may engage in individualized consideration only to maintain dependence from their followers. In which case, the leader's true motivations are likely to be discovered in time, and the follower's level of satisfaction with the leader will decrease. Authentic leaders, on the other hand, value close relationships with followers (i.e., relational transparency) and act according to this value (i.e., authentic behavior). Therefore, it is less likely that the follower's level of satisfaction with an authentic leader will diminish due to false pretenses. Thus, the following hypothesis is proposed:

Hypothesis 3: (a) Authentic leadership is positively related to followers' satisfaction with leadership, and (b) this relationship is stronger than the one between transformational leadership and employee satisfaction with leadership.

Follower Motivations

Affective supervisor commitment. Organizational commitment is, in a broad sense, the employee's level of psychological attachment to the organization. This construct has been studied extensively in the I/O psychology literature, and has been linked to a variety of antecedents and organizational outcomes. In the leadership literature specifically, a significant relationship has been found for transformational (e.g., Lee, 2005; Rai & Sinha, 2000), transactional (Nguni et al., 2006), and authentic leadership (Jensen & Luthans, 2006), and the organizational commitment of the employee. Along with its global measurement, organizational

commitment has also been broken down into three specific dimensions (Meyer & Allen, 1991). *Affective* commitment is when the employee has a positive emotional attachment to the organization. *Continuance* commitment refers to the employee being committed to the organization because he or she thinks that losing organizational membership would be costly. Finally, *normative* commitment refers to the employee remaining with the organization due to feelings of obligation.

From the organization's perspective, it is desirable for the employee to not only be committed, but to have a genuine, positive commitment to the company's values and goals. It is less desirable for the employee to be committed due to the relative costs of leaving or a felt obligation to the company. When the employee is emotionally committed, his or her behavior is more likely to align with organizational goals. For example, in a recent meta-analysis (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002), it was found that affective commitment had a stronger relationship than continuance or normative commitment to many positive organizational outcomes, such as attendance, performance, and OCB. Strong positive correlations were also found between many work experience variables and the affective commitment of the employee. Therefore, in order to increase the affective commitment of the employee, the organization should provide a supportive work environment (e.g., Eisenberger, Huntington, Hutchison, & Sowa, 1986). One of the ways this could be achieved is through strong, supportive leadership (Meyer et al., 2002).

As it is likely that the employee will be affectively committed to the organization that provides a supportive work environment, at a more specific level, it is likely that the employee will be committed to the leader (supervisor) that is part of the supportive work environment. Although the distinction between commitment to the organization and commitment to the supervisor is not a common area of focus, research highlights the importance of it being so. For example, Becker and Kernan (2003) found that when controlling for continuance and normative commitment, affective supervisor commitment was related to employee in-role performance, while affective organizational commitment was not. In light of Judge et al.'s (2004) findings, it is also likely that the employee will be highly committed to the supervisor that shows him or her consideration (i.e., transformational leadership). However, as pointed out by Bass and Steidlmeier (1999), this consideration may not always be genuine. Therefore, the employee will likely be even more committed to the supervisor when the consideration shown is based on the genuine values of the leader, as is the case with authentic leadership. Thus, the following hypothesis is proposed:

Hypothesis 4: (a) Authentic leadership is positively related to followers' affective supervisor commitment, and (b) this relationship is stronger than the one between transformational leadership and affective supervisor commitment.

Collective identity. Although leadership effectiveness is typically measured by observing the leader's influence on others (Chemers, 2001), rarely is this influence measured in terms of follower psychological processes. In other words, while there is a fair amount of literature on leader traits and behavior, and

the organizational outcomes of effective leadership, there is still much to be gained by focusing on the mediating psychological effects that the leader has on the follower. One such psychological effect is the follower's sense of collective identity or group orientation.

Existing research on the topic of collective identity supports the notion that leaders can elicit this effect in their followers. For example, Shamir, House, and Arthur (1993) proposed a model of the motivational effects of charismatic leadership. As part of the model, they propose that charismatic leader behaviors engage the self-concept of the follower in the interest of the leader's mission. Specifically, they state that, "such leader behavior increases the salience of the collective identity in members' self-concepts" (p. 586). Building on the theoretical work of Shamir et al., Paul, Costley, Howell, Dorfman, and Trafimow (2001) found that both charismatic and integrative (charismatic plus individualized consideration) leadership increased the accessibility of followers' collective self-concepts (i.e., the likelihood of thinking about themselves as a group, rather than independent individuals). Furthermore, in a recent review article on leadership and identity, van Knippenberg, van Knippenberg, De Cremer, and Hogg (2004) presented a number of studies that supported the relationship between leader behavior and the social identification or collective self-construal of the follower.

Each of these articles is supportive of a link between leadership and follower collective identity. However, these studies only examined certain types

of leader behavior, namely charismatic and transformational leadership. In summarizing their review, van Knippenberg et al. (2004) point to the need to study leader behaviors that have been either ignored or understudied in leadership research, within the context of follower identity (p. 849). The current study provides an excellent opportunity to address this need by testing a leadership style that is only beginning to receive empirical attention. As is the case with charismatic and transformational leadership, it is thought that leaders who engage in authentic leadership will also elicit the psychological effect of collective identity in their followers. Therefore, the following hypothesis is proposed:

Hypothesis 5: Authentic leadership is positively related to followers' collective identity.

Trust in the leader. In organizations, followers depend upon their leaders to reward them for their performance, usually in the form of promotions, salary increases, or other incentives. Because the leader plays a large part in securing and providing these incentives, trust between the employee and the leader becomes an important issue. It follows, then, that if employees perceive the leader as having attributes that promote trust, they are more likely to rate them as effective. Dirks and Ferrin (2002) conducted a meta-analysis on the level of trust in leadership and its impact for the organization. Using research from the past forty years, they examined both the antecedents and the outcomes of trust. They found a significant relationship for both transformational leadership ($\rho = .72$) and transactional leadership ($\rho = .59$) as antecedents to trust in leadership. They explain that transformational leaders show more individualized concern with their followers, while transactional leaders are more concerned with making sure employees

are rewarded fairly for their efforts. Thus, both are seen as effective for establishing trust, but individual concern may be seen as more trustworthy than contingent reward. Adding to these findings, leaders may be seen as even more trustworthy when they show individual concern *and* this individual concern is genuine. For example, leaders who engage in authentic leadership are open and forthcoming in close relationships (i.e., relational transparency). They take the time to get to know their followers, showing high levels of individual concern. However, their motives behind this behavior are not self-serving, as would be the case if a transformational leader feigned concern for the employee in an effort to advance his or her own agenda (e.g., Bass & Steidlmeier, 1999). Rather, the leader is truly concerned about the employee because he or she looks out for the good of the group (i.e., positive moral perspective) and acts according to this value (i.e., authentic behavior). Thus, the following hypothesis is proposed:

Hypothesis 6: (a) Authentic leadership is positively related to followers' trust in leadership, and (b) this relationship is stronger than the one between transformational leadership and employee trust in leadership.

Positive psychological capital. Arguing that human resources departments are rarely given their due when it comes to bottom-line impact, Luthans and Youssef (2004) recently advanced the concept of positive psychological capital. Drawing on this work and on the emerging positive approach to managing human resources (i.e., positive organizational behavior), Luthans, Yousseff, and Avolio (2007) further refined the concept of positive psychological capital. They defined this construct as “an individual’s positive psychological state of development [that] is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at

challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success” (Luthans et al., 2007, p. 3). These authors argue that these resources are measurable, developable, and just as important to the bottom line as financial, structural, or technological capital.

It may also be the case that the factors associated with positive psychological capital are more easily developed through certain forms of leadership. Indeed, Luthans and Avolio (2003) describe authentic leaders as confident, hopeful, optimistic, and resilient (p. 243). Additionally, it has been argued that one of the ways that positive psychological capital can be developed is through behavioral modeling of the leader by the follower (e.g., Luthans & Avolio, 2003; Luthans & Youssef, 2004; Gardner et al., 2005). Thus, to the extent that the leader displays the characteristics of psychological capital, it is likely that the follower will also display these characteristics. Therefore, the following hypothesis is proposed:

Hypothesis 7: Authentic leadership is positively related to followers’ positive psychological capital.

Follower Behaviors

Just as leadership can influence what the employee thinks, it is also likely to influence what the employee does. In line with Lord and Brown (2004), I proposed that follower motivation mediates the effects of leadership styles on follower behavior. The outcomes to be examined generally represent the type of behavior that is desired from the employee by the organization—task performance, organizational citizenship behavior

(OCB), and (a lack of) workplace deviance. In the sections below, I discuss the motivations that are related to each of these behaviors. Because existing research supports many of the relationships between follower motivation and behavior, my presentation of them is relatively brief.

Task performance. It is important for organizations in a competitive business environment to maintain a high level of performance from their employees. Although the link between leader behavior and employee performance has been found in a number of studies (e.g., Meyer et al., 2002; Conger, Kanungo, & Menon, 2000; Podsadoff et al., 1990), it is a goal of this study to investigate the process through which this relationship occurs.

One of the mechanisms through which leader behavior affects employee performance may be the employee's commitment to the supervisor. Recall that Meyer et al. (2002) found a significant meta-analytic relationship between a supportive work environment (inclusive of strong leadership) and the employee's affective commitment, and between affective commitment and job performance. Furthermore, Becker and Kernan (2003) found that affective supervisor commitment was related to employee in-role performance after controlling for other forms of commitment. Thus, leader behavior may inspire affective commitment from the employee, which may then result in higher levels of task performance.

Relationships between leader behavior and task performance may also be mediated by follower trust. As mentioned above, Dirks and Ferrin (2002) conducted a meta-analysis on trust in leadership. In the article, they presented a

framework where leader actions led to employee trust, which then led to certain behavioral outcomes. Drawing on the logic of social exchange, they argued that employees are willing to reciprocate the care and consideration shown by the leader in ways that benefit the organization. One of the ways this behavior is reciprocated is through increased job performance from the employee. Indeed, across 21 studies, these authors found an overall significant relationship between trust in leadership and employee job performance (both objectively and subjectively measured).

Lastly, positive psychological capital, a relatively new construct, is also relevant for task performance, yet there has yet to be much empirical support for this assumption. To address this need, Luthans, Avolio, Avey, and Norman (2007) developed a measure that assessed the construct both globally and at the facet level. Using this measure, the authors examined the self-rated job performance of employees. In multiple studies, they found that positive psychological capital was indeed related to employee job performance. Also recall that authentic leaders have been described as having each dimension of positive psychological capital (i.e., hope, optimism, confidence, and resiliency, Luthans & Avolio, 2003) and, through positive modeling by the leader, these traits are developed by the follower (e.g., Luthans & Avolio, 2003; Luthans & Youssef, 2004; Gardner et al., 2005). Thus, leader behavior may develop positive psychological capital in the follower, which the follower may then use to increase job performance. In line with the aforementioned reasoning, the following hypothesis is proposed:

Hypothesis 8: Leadership style has an indirect effect on task performance that is mediated by followers' (a) affective supervisor commitment, (b) trust, and (c) positive psychological capital.

Organizational citizenship behavior. It is desirable for any organization to have employees that go above and beyond their own job roles (e.g., Hogan, Rybiki, & Motowidlo, 1998) Employees who engage in organizational citizenship behavior go above and beyond using five general forms of behavior (Organ, 1988). Altruism is what is typically thought of as helping or prosocial behavior. Courtesy is a basic consideration for others. Sportsmanship is the general idea of “going with the flow” and not complaining about minor problems or inconveniences. Conscientiousness is commonly thought of as being a “good citizen” in the workplace, with behaviors such as arriving on time to meetings. Finally, civic virtue is a behavior performed for the good of the organization or workgroup, instead of a specific individual.

The relationship between leadership style and organizational citizenship behavior has been examined in past studies. Nguni, Slegers, and Denessen (2006), for example, used a global measure of OCB and found that transformational and transactional leadership were both related to citizenship behavior, with transformational leadership having greater effect sizes. Other studies have also supported the relationship between transformational leadership and OCB (e.g., Chaoping, Hui, & Kan, 2006; Purvanova, Bono, & Dzieweczynski, 2006). Using the principles of social exchange theory, it is likely that positive leader behavior results in greater OCB due to its focus on the employee, with the employee engaging in OCB in return for fair treatment.

The fair treatment shown by the leader may have other, similar effects as well. As discussed above, a significant relationship has been found between leader behavior and follower collective identity (Shamir et al., 1993; Paul et al., 2001), where the follower's self-concept becomes more aligned with the mission of the leader or group. Additionally, studies have shown employee collective identity as a mediator between leader behavior and employee performance (e.g., Conger et al. 2000). Thus, leader behavior may create a sense of "oneness" between the follower and leader, which then results in leader-centered or group-centered employee behavior. OCBs are one such set of behaviors that benefit the workgroup. To the extent that the leader's mission involves group performance (which, in an organizational setting is usually the case), OCBs may also serve as a form of leader-centered behavior. Thus, leader behavior may elicit a sense of collective identity which results in increased OCB.

In addition to collective identity, trust likely also relates to OCB. Dirks and Ferrin (2002) examined the relationship between employee trust in leadership and OCB. They found a significant meta-analytic relationship between these two variables. In addition, Podsakoff, MacKensie, Moorman, and Fetter (1990) tested the effects of transformational leadership on OCB, and found that this effect was mediated by followers' trust in the leader. Thus, leadership may create follower trust, which then results in follower OCB. In light of these findings, the following hypothesis is proposed:

Hypothesis 9: Leadership style has an indirect effect on OCB that is mediated by followers' (a) collective identity, and (b) trust in the leader.

Workplace deviance. According to Rotundo and Sackett (2002), workplace deviance, task performance, and OCB represent the three major dimensions of employee job performance. Workplace deviance has been defined as “voluntary behavior that violates significant organizational norms and in so doing threatens the well-being of an organization, its members, or both” (Robinson & Bennett, 1995; p. 556). This behavior is a major problem for organizations, with estimated annual costs of \$6 billion to \$200 billion in the United States alone (Greenberg, 1997; Murphy, 1993; Vardi & Weitz, 2004). Thus, examining factors that help suppress these behaviors is important, if not vital, to the organization’s bottom line.

Studies have shown that leadership does have an impact on workplace deviance. For example, in a recent meta-analysis, Hershcovis, Turner, and Arnold, et al. (2007) examined the link between leadership and workplace aggression. They found a significant relationship between interpersonal injustice (i.e., perceived treatment from the supervisor during enactment of formal procedures and the level of respect, honesty, and dignity shown to the employee) and workplace aggression, and between poor leadership (i.e., perception of supervisor hostile verbal and non-verbal behavior, overcontrol, authoritarian management, and lack of charismatic leadership) and workplace aggression. Thus, poor leadership results in certain forms of deviance in the workplace. However, the inverse may also be true. That is, a negative relationship may exist between more ideal forms of leadership (e.g., authentic and transformational) and workplace deviance. In addition, the collective identity inspired by the leader may serve as a buffer against workplace deviance, where the employee may choose not to engage in workplace

deviance for the good of the group or the leader's mission. In line with these arguments, the following hypothesis is proposed:

Hypothesis 10: Leadership style has an indirect effect on workplace deviance that is mediated by followers' collective identity.

Table 1

Summary of proposed hypotheses

Hypothesis 1: A measure of authentic leadership will be distinguishable from measures of transformational and transactional leadership when factor analyzed.

Hypothesis 2: (a) Authentic leadership is positively related to followers' general leader impression, and (b) this relationship is stronger than the one between transformational leadership and general leader impression.

Hypothesis 3: (a) Authentic leadership is positively related to followers' satisfaction with leadership, and (b) this relationship is stronger than the one between transformational leadership and employee satisfaction with leadership.

Hypothesis 4: (a) Authentic leadership is positively related to followers' affective supervisor commitment, and (b) this relationship is stronger than the one between transformational leadership and affective supervisor commitment.

Hypothesis 5: Authentic leadership is positively related to followers' collective identity.

Hypothesis 6: (a) Authentic leadership is positively related to followers' trust in leadership, and (b) this relationship is stronger than the one between transformational leadership and employee trust in leadership.

Hypothesis 7: Authentic leadership is positively related to followers' positive psychological capital.

Hypothesis 8: Leadership style has an indirect effect on task performance that is mediated by followers' (a) affective supervisor commitment, (b) trust, and (c) positive psychological capital.

Hypothesis 9: Leadership style has an indirect effect on OCB that is mediated by followers' (a) collective identity, and (b) trust in the leader.

Hypothesis 10: Leadership style has an indirect effect on workplace deviance that is mediated by followers' collective identity.

Overview of the Present Study

Hypotheses were examined using a variety of methods. First, a measure for authentic leadership was developed through a comprehensive literature review and exploratory factor analyses. This measure was then confirmed on a separate pilot sample using confirmatory factor analyses (CFA). Additional CFAs were conducted to examine the discriminant validity of the new measure, which served as a test for Hypothesis 1. The remaining hypotheses were examined using structural equation modeling (SEM). For H2 through H7, a model containing direct relationships between leadership and follower perception and motivation variables was compared against commonly accepted fit criteria (Carmines & McIver, 1981; Bentler & Bonnett, 1980; Bentler, 1990; Browne & Cudeck, 1993). For the remaining hypotheses, a full hypothesized model was compared to alternative models that included an additional direct path between leadership and one of the follower behavior variables. For H8, a direct path was added between leadership and employee task performance, for H9, between leadership and organizational citizenship behavior, and for H10, between leadership and workplace deviance. The rigorous approach through which this study was conducted allowed the researcher to address multiple gaps in the literature while ensuring confidence in the study's findings.

Chapter Two

Method

Sample

Three different samples were used in the current study. The first two samples were used for pilot testing, and demographic information for these samples is reported in later sections. Information for the primary study is reported here. In order to obtain a representative sample, participants were recruited from both corporate and academic settings. Local businesses were asked to participate, along with students from the psychology department at the University of South Florida. To qualify for the study, it was required that participants worked at least part-time (defined as 20 hours per week) and had been with their current supervisor for a minimum of three months. The sample for the primary study was composed of supervisor-subordinate pairs ($N = 132$). Participants worked in a variety of industries, including education (20.5%), transportation (15.2%), retail (12.9%), financial (6.8%), public or government service (6.8%), hotel or restaurant service (6.1%), manufacturing (6.1%), medical (4.5%), and others (21.2%). The average age for subordinates was 28.7 years ($SD = 11.5$), and 43.8 years ($SD = 11.7$) for supervisors. Both subordinates and supervisors were mostly female (64% and 52%, respectively).

Procedure

Participants completed the study through online surveys. Prior to completing the survey, subordinates were asked to provide a valid email address for their supervisor.

Upon successful completion, supervisors were sent a link to a separate online survey. Each supervisor-subordinate pair was given a unique code in order to preserve their anonymity while enabling the researcher to track their scores. Students in the psychology department were tracked using the SONA system and given extra credit for their participation.

Measures

The information provided below is for all measures used in both pilot studies as well as the primary study. Additional information regarding the items used in pilot studies is presented in later sections, as is the reliability data for each scale.

Authentic leadership. As mentioned in the introductory chapter, there was no validated scale for authentic leadership in existence at the time of this study. Therefore, an authentic leadership scale was developed and pilot tested. Based on the results of pilot testing (see following section), I created a 20-item authentic leadership scale that consisted of two dimensions: regulatory authenticity (13 items; $\alpha = .93$) and relational authenticity (7 items; $\alpha = .93$). Participants were asked to rate the frequency of these behaviors on a five-point Likert scale, ranging from 0 (*not at all*) to 4 (*frequently, if not always*).

Transformational leadership. Transformational leadership was assessed using items from the Multifactor Leadership Questionnaire (MLQ-5X), developed by Bass (1985). The MLQ is the primary quantitative instrument used to measure the transformational leadership construct. It has appeared in over 75 research studies, with samples varying by industry sector and organizational level (Lowe, Kroeck, &

Sivasubramaniam, 1996). The scales for transformational leadership included four items each for five dimensions: idealized influence – attributed, idealized influence – behavior, individualized consideration, inspirational motivation, and intellectual stimulation (see Appendix B). Participants were asked to rate the frequency of these behaviors on a five-point Likert scale, ranging from 0 (*not at all*) to 4 (*frequently, if not always*).

Transactional leadership. Transactional leadership was also assessed using items from the Multifactor Leadership Questionnaire (MLQ-5X), developed by Bass (1985). The scales for transactional leadership included four items each for three dimensions: contingent reward, management by exception – active, and management by exception – passive (see Appendix C). Participants were asked to rate the frequency of these behaviors on a five-point Likert scale, ranging from 0 (*not at all*) to 4 (*frequently, if not always*).

General leader impression. The degree to which the ratee was seen as a leader was measured using the General Leader Impression scale (GLI; Cronshaw & Lord, 1987). This five-item scale asked participants (followers) to indicate (1) the amount of leadership exhibited by the supervisor, (2) how willing the follower is to choose the supervisor as a leader, (3) how typical the supervisor is as a leader, (4) the degree that the supervisor engages in leader behavior, and (5) the degree that the supervisor fits the follower's image of a leader (see Appendix D). Cronshaw and Lord (1987) examined the leader perceptions of 104 undergraduates, and found good internal consistency ($\alpha = .87$) for this scale. In the current study, participants were asked to rate their supervisors using a seven-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Satisfaction with the leader. The follower's level of satisfaction with the leader was measured using a two-item scale from the MLQ-5X (Bass, 1985). Participants were asked to indicate if the leader "uses methods of leadership that are satisfying," and if the leader "works with me in a satisfactory way." Items were rated on a five-point Likert scale ranging from 0 (*not at all*) to 4 (*frequently, if not always*).

Affective supervisor commitment. Affective supervisor commitment was measured using eight items from Allen and Meyer's (1990) Affective Commitment scale. The wording of the items for this scale was changed to reflect a rating for the supervisor instead of the organization. For example, the item "I would be very happy to spend the rest of my career with this organization" was changed to "I would be very happy to spend the rest of my career with my supervisor." Becker and Kernan (2003) used this method, and reported separate reliability estimates of $\alpha = .82$ (both for MBA and undergraduate samples) for affective commitment to the supervisor. The items for this scale are listed in Appendix E. Participants were asked to rate their supervisor using a seven-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Collective identity. Collective identity was assessed using a modified version of the scale created by Conger, Kanungo, and Menon (2000) ($\alpha = .78$). To make the scale more relevant to the current study, items were re-worded to reflect collective identity between the leader and the follower, rather than the follower and the workgroup. For example, the item "We see ourselves in the workgroup as a cohesive team" was reworded as "I see myself and my supervisor as a cohesive team." The items are included in

Appendix F. Participants rated the leader on a seven-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Trust in the leader. The follower's level of trust in the leader was assessed using three items from Podsakoff et al.'s (1990) Trust in / Loyalty to the Leader scale ($\alpha = .90$). The scale consisted of the following items: "I feel quite confident that my supervisor will always treat me fairly," "My supervisor would never try to gain an advantage by deceiving workers," and "I have complete faith in the integrity of my manager / supervisor." Participants rated the leader on a seven-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Positive psychological capital. As described above, positive psychological capital is a composite construct that encompasses the measurable, developable, and manageable components of positive organizational behavior (Luthans et al., 2007). Specifically, this construct is comprised of hope, resilience, optimism, and self-efficacy (confidence). Luthans, Avolio, Avey, and Norman (2007) recently developed and validated a scale for this construct and labeled it the PsyCap Questionnaire (PCQ). Using four separate samples, they found acceptable internal consistencies for each PsyCap dimension ($\alpha = .66 - .89$) and good internal consistency for the composite dimension ($\alpha = .88 - .89$). Furthermore, they found a positive significant relationship between the composite PsyCap measure and both job satisfaction ($r = .35, p < .05$) and job performance ($r = .24, p < .05$). The 24-item PsyCap questionnaire asks participants to rate their self-efficacy, hope, resilience, and optimism using a seven-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). In the current study, these items were combined to form a

composite PsyCap measure, as this has been argued as a better predictor than the four individual facets (Luthans, Avolio, et al., 2007). The entire set of items is included in Appendix G.

Task performance. Follower performance was assessed using Becker and Kernan's (2003) measure of in-role performance, which is based on a scale originally developed by Williams and Anderson (1991). This seven-item measure was completed by the supervisor. Example items include: "Adequately completes assigned duties" and "Meets formal performance requirements of the job" (all items are listed in Appendix H). Becker and Kernan reported alphas of .92 and .85 for this scale, respectively, using samples of MBA students and undergraduates. Supervisors were asked to rate their subordinates on a seven-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Organizational citizenship behavior. Organizational citizenship behavior (OCB) was assessed using a scale from Podsakoff et al. (1990). This 24-item scale (five items for conscientiousness, five items for sportsmanship, four items for civic virtue, five items for courtesy, and five items for altruism) was completed by the supervisor. Example items include: "Attendance at work is above the norm" for conscientiousness, "Tends to make 'mountains out of molehills' (reverse-coded)" for sportsmanship, "Keeps abreast of changes in the organization" for civic virtue, "Does not abuse the rights of others" for courtesy, and "Is always ready to lend a helping hand to those around him/her" for altruism (see Appendix I). Podsakoff et al. found good internal consistencies for conscientiousness ($\alpha = .82$), sportsmanship ($\alpha = .85$), courtesy ($\alpha = .85$), and altruism ($\alpha =$

.85), and an acceptable reliability estimate for civic virtue ($\alpha = .70$). Supervisors were asked to rate their subordinates on a seven-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Workplace deviance. Deviant behavior at work was assessed using Bennett and Robinson's (2000) measure of Deviant Workplace Behaviors ($\alpha = .81$). This 19-item, self-report scale asks participants to rate the frequency of their behavior on a seven-point scale from 1 (*never*) to 7 (*daily*). Example items include, "Taken an additional or a longer break than is acceptable at your workplace," "Discussed confidential company information with an unauthorized person," and "Dragged out work in order to get overtime" (see Appendix J).

Chapter Three

Pilot Testing

Pilot Study 1

In order to examine how leaders demonstrate authentic leadership, behavioral items were generated based on an extensive review of the literature. This review resulted in five theoretical dimensions (positive moral perspective, self-awareness, balanced processing, relational transparency, and authentic behavior), as described in the introduction. Ten items were created for each dimension, for a total pool of 50 items (see Appendix A). These items were administered to a sample of undergraduate students ($N = 311$) from a large university in the Southeast US. The average age of participants was 21.8 years ($SD = 3.5$), they were primarily female (68%), they worked an average of 28.8 hours per week ($SD = 7.6$), and had an average relationship tenure with their current supervisor of 22.1 months ($SD = 20.6$). Participants rated the frequency of behavior shown by their supervisor on a scale from 0 (*not at all*) to 4 (*frequently, if not always*).

Exploratory factor analyses (EFA) using maximum likelihood (ML) estimation were conducted to examine the factor structure of the data. The goal of EFA is to arrive at a more parsimonious representation of the measured variables in a data set (e.g., Thurstone, 1947). For pilot 1, five theoretical dimensions were proposed. First, separate EFAs were conducted on the items belonging to each theoretical dimension in the data set to ensure that items within the same dimension ‘hung together.’ For each analysis, the

factor with the greatest number of high loading items was retained, and items loading onto all other factors within the dimension were eliminated. This allowed the researcher to establish a common factor for each theoretical dimension, and eliminate items that did not load highly onto that factor (Fabrigar, Wegener, MacCallum, & Strahan, 1999). This resulted in the elimination of 19 items: 4 positive moral perspective items, 7 self-awareness items, 2 balanced processing items, 3 authentic behavior items, and 3 relational transparency items. Thus, 31 items were retained for further analysis.

An EFA was then performed on the entire set of 31 items. Using ML estimation and a combination of the Kaiser rule (i.e., retain factors with eigenvalues > 1) and scree test, it was determined that four factors should be retained. These factors accounted for 61.6% of the variance in the data. The factors were rotated using a direct oblimin rotation, as it was assumed that they would be correlated. Additionally, 5 cross-loading items (defined as having loadings within .10 on multiple factors) and 1 item with low loadings (loadings $< .40$) were eliminated from the factor loading matrix, as recommended by Thurstone (1947). After removing the aforementioned items, Factor 1 had 13 items: 6 positive moral perspective items, 2 balanced processing items, 3 self-awareness items, and 2 authentic behavior items; and Factor 2 had 7 relational transparency items. Factor 3 had no items; and Factor 4 had 5 items: 3 authentic behavior items and 2 balanced processing items. Factor 3 was not considered further as no items were retained. Furthermore, since the goal of the researcher is to identify the “major” factors underlying the measures (Fabrigar et al., 1999) Factor 4 was not considered further, as a similar number of authentic behavior and balanced processing items were

retained in Factor 1. The remaining two factors accounted for 51.7% of the total variance in the set of items. The first factor contained high loadings for the theoretical dimensions of positive moral perspective, self-awareness, balanced processing, and authentic behavior, while the second factor contained high loadings for the dimension of relational transparency.

These findings are aligned with Kernis' (2003) original work on the nature of authenticity. In describing four theoretical dimensions of authenticity, the author states that "the awareness, unbiased processing, and behavior components of authenticity are related to, but separable from, each other" (p. 15). The author then goes on to describe a fourth, relational component of authenticity. Indeed, results of the current EFA support the notion that the elements of positive moral perspective, self-awareness, balanced processing, and authentic behavior, although each theoretically distinct, are empirically related to each other, while the relational component of authenticity remains a separate factor. In light of these findings, and in consideration of Kernis' conceptualization of authenticity, these two factors were labeled *regulative authenticity* and *relational authenticity* – regulative in the sense that the leader's thoughts and behaviors are regulated by their positive morals and deep sense of self, and relational in the sense that the leader seeks openness and truthfulness in close relationships. Results of item analysis provided further support for both factors, with an alpha reliability coefficient of .93 for the regulative authenticity items and .93 for the relational authenticity items. Thus, a two-factor, 20-item scale for authentic leadership (overall $\alpha = .95$) was arrived at through

EFA. The generalizability of this two-factor solution was next evaluated in a second pilot study using confirmatory factor analysis.

Pilot Study 2

Before testing the proposed model, it was necessary to further examine the discriminant validity of the authentic leadership measure (Cooper et al., 2005). Therefore, a second pilot study was conducted. This study had two objectives: to verify the factor structure of authentic leadership that emerged in the first pilot study and to examine the separateness of authentic, transformational, and transactional leadership (i.e., which served as a test of Hypothesis 1).

Participants ($N = 285$) for this study were employed undergraduates from a large university in the Southeast US. The average age of participants was 22.3 years ($SD = 3.7$), they were mostly female (66%), they worked an average of 30.2 hours per week ($SD = 7.8$), and had an average relationship tenure with their current supervisor of 20.8 months ($SD = 21.6$). Each participant rated their supervisor's frequency of behavior for the original 50-item authentic leadership scale, a 20-item transformational leadership scale (MLQ-5X; Bass, 1985), a 12-item transactional leadership scale (MLQ-5X; Bass, 1985), and 24 items from Gardner and Cleavenger's (1998) leader impression management scale (see Table 2 for correlations and scale reliabilities). All measures used a Likert-type rating scale from 0 (*Not at all*) to 4 (*Frequently, if not always*).

First, a CFA was conducted in order to verify the factor structure of the initial data set. Data were analyzed using AMOS version 17.0 (Arbuckle, 2008). The measurement model and item loadings for the 2-factor model are presented in Figure 2.

Table 2

Correlations and scale reliabilities for pilot 2 study variables

Variable	1	2	3	4	5	6
1. Authentic Leadership	(.94)					
2. Transformational Leadership	.87**	(.96)				
3. Transactional Leadership	.00	.16**	(.47)			
4. Self-Promotion	-.35**	-.22**	.42**	(.90)		
5. Intimidation	-.57**	-.47**	.30**	.54**	(.82)	
6. Ingratiation	.70**	.66**	.13**	-.07	-.26**	(.80)

** $p < .01$.

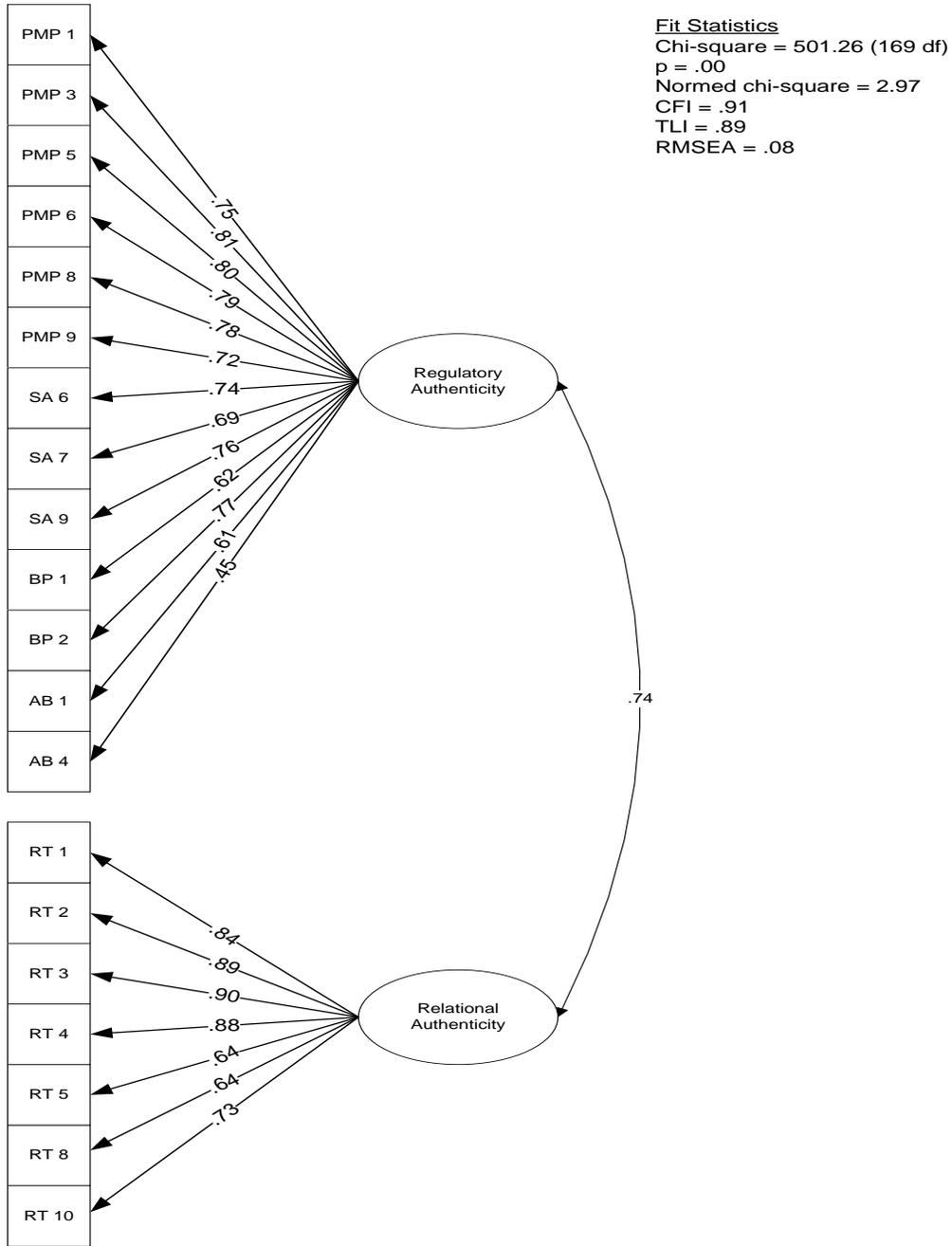
The fit statistics for this model were as follows: $\chi^2 = 501.26$, normed $\chi^2 = 2.97$, CFI = .91, TLI = .89, RMSEA = .08. Although the model had a significant χ^2 , this statistic is highly sensitive to sample size (e.g., Joreskog & Sorbom, 1993) and it had an acceptable normed χ^2 value (i.e., values less than 3 are desirable; Carmines & McIver, 1981). Fit indices that compare the model to a baseline independence model, such as CFI and TLI, also indicate adequate fit to the data (i.e., values close to 1.00 indicate very good fit; Bentler & Bonnett, 1980; Bentler, 1990). Finally, according to Browne and Cudeck (1993), model RMSEA should be less than .10 in order to be minimally acceptable. The model was acceptable according to this criterion. Based on these statistics, the 2-factor, 20-item model from the first pilot study had acceptable fit. Thus, the two-factor 20-item measure of authentic leadership that was arrived at through exploratory analyses in the first pilot was confirmed on a separate sample using CFA.

In order to further examine the discriminant validity of the new authentic leadership measure, additional CFAs were conducted. Measures for authentic, transactional, and transformational leadership were compared. According to Hypothesis 1, these measures were each thought to have unique factor structures. To test this, the fit

of an initial 3-factor model (see Figure 3 for model and standardized estimates) was compared against that of five separate alternative models (see Figures 4-8). The first alternative model (Model 2) was set up similarly to the initial model, but with contingent reward serving as an indicator of transformational leadership instead of transactional leadership, as this is often found when these leadership styles are factor analyzed. Models 3, 4, and 5 were each variations of possible 2-factor models, with Model 3 having an authentic factor and a combination transactional-transformational factor, Model 4 having transactional and a combination authentic-transformational factor, and Model 5 having a transformational and a combination authentic-transactional factor. The final model (Model 6) had a single leadership factor with all indicators loading onto the factor. Thus, if the initial hypothesized model, or the alternative hypothesized model (Model 2) had better fit than each of the comparative models, this would provide support for Hypothesis 1.

To reduce the number of observed variables in the models, item parcels and subscale scores were used as indicators for each factor. The initial 3-factor model (Model 1) contained 3 subscale indicators for transactional leadership (i.e., average scores for contingent reward, management by exception-active, and management by exception-passive), 5 subscale indicators for transformational leadership (i.e., average scores for individual consideration, idealized influence-attributed, idealized influence-behavioral, inspirational motivation, and intellectual stimulation), and 4 item parcel indicators for authentic leadership (i.e., 2 item parcels each for regulatory authenticity and relational

Figure 2. Model and standardized estimates for measure of authentic leadership.



Notes. PMP = positive moral perspective; SA = self-awareness; BP = balanced processing; AB = authentic behavior; RT = relational transparency

Figure 3. Model and standardized estimates for Hypothesis 1.

Chi-square = 152.38 (49 df)

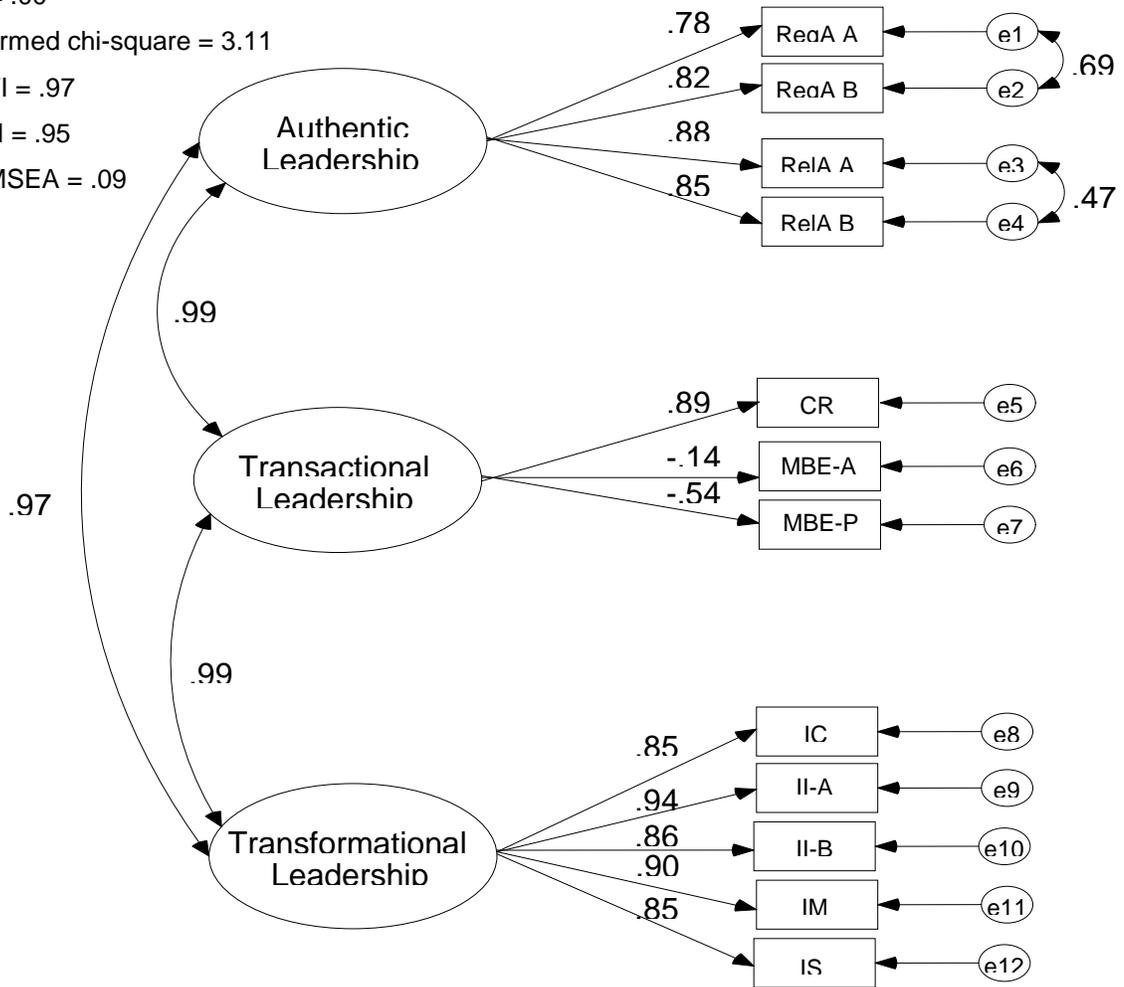
p = .00

Normed chi-square = 3.11

CFI = .97

TLI = .95

RMSEA = .09



Notes. RegA A = regulatory authenticity – A scale; RegA B = regulatory authenticity – B scale; RelA A = relational authenticity – A scale; RelA B = relational authenticity – B scale; CR = contingent reward; MBE-A = management by exception – active; MBE-P = management by exception – passive; IC = individual consideration; II-A = idealized influence – attributed; II-B = idealized influence – behavioral; IM = inspirational motivation; IS = intellectual stimulation

Figure 4. Model and standardized estimates for contingent reward alternative loading model (Model 2).

Chi-square = 126.81

p = .00

Normed chi-square = 2.59

CFI = .98

TLI = .96

RMSEA = .08

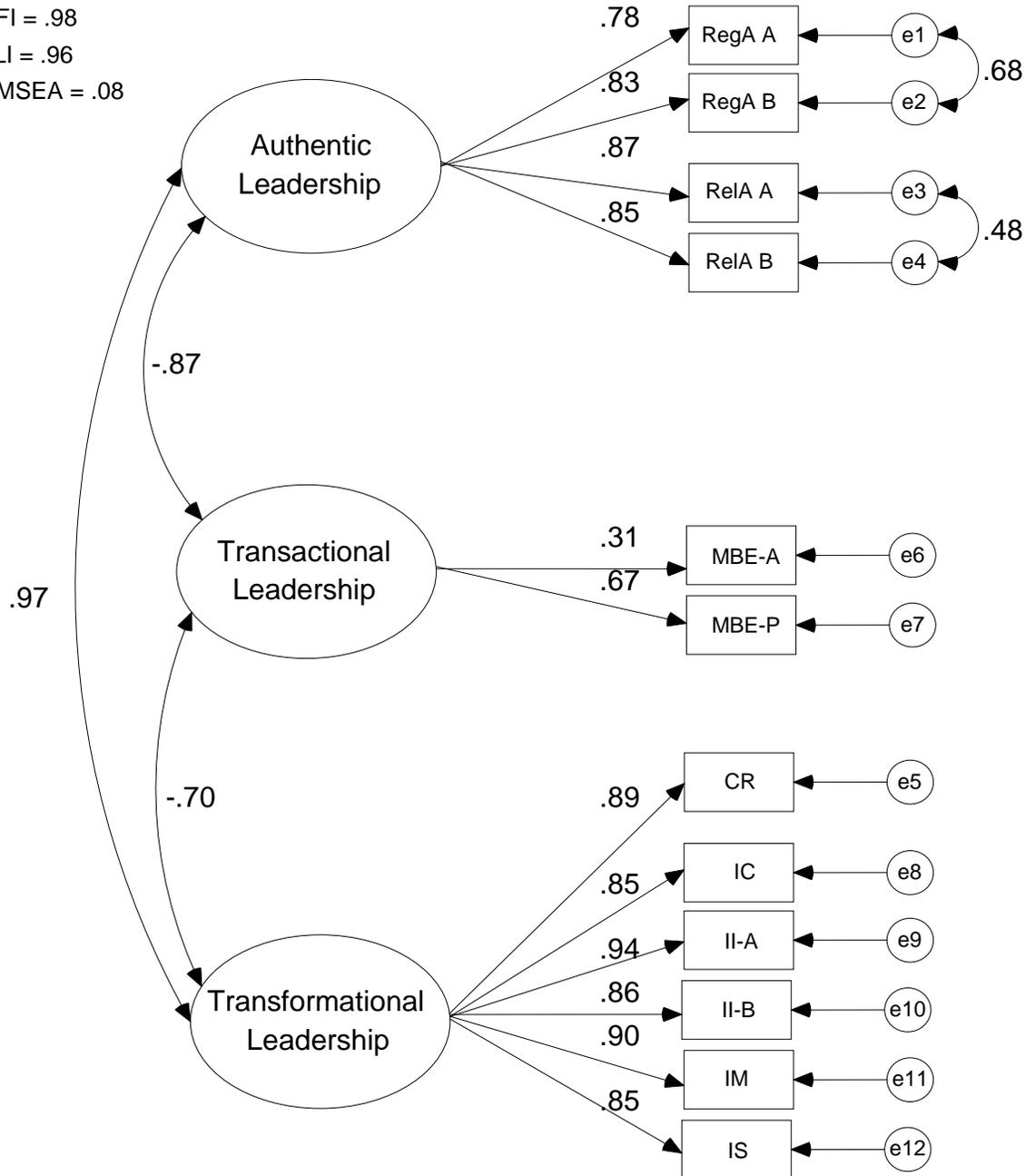


Figure 5. Model and standardized estimates for transactional-transformational model (Model 3).

Chi-square = 160.04 (51 df)

p = .00

Normed chi-square = 3.14

CFI = .97

TLI = .95

RMSEA = .09

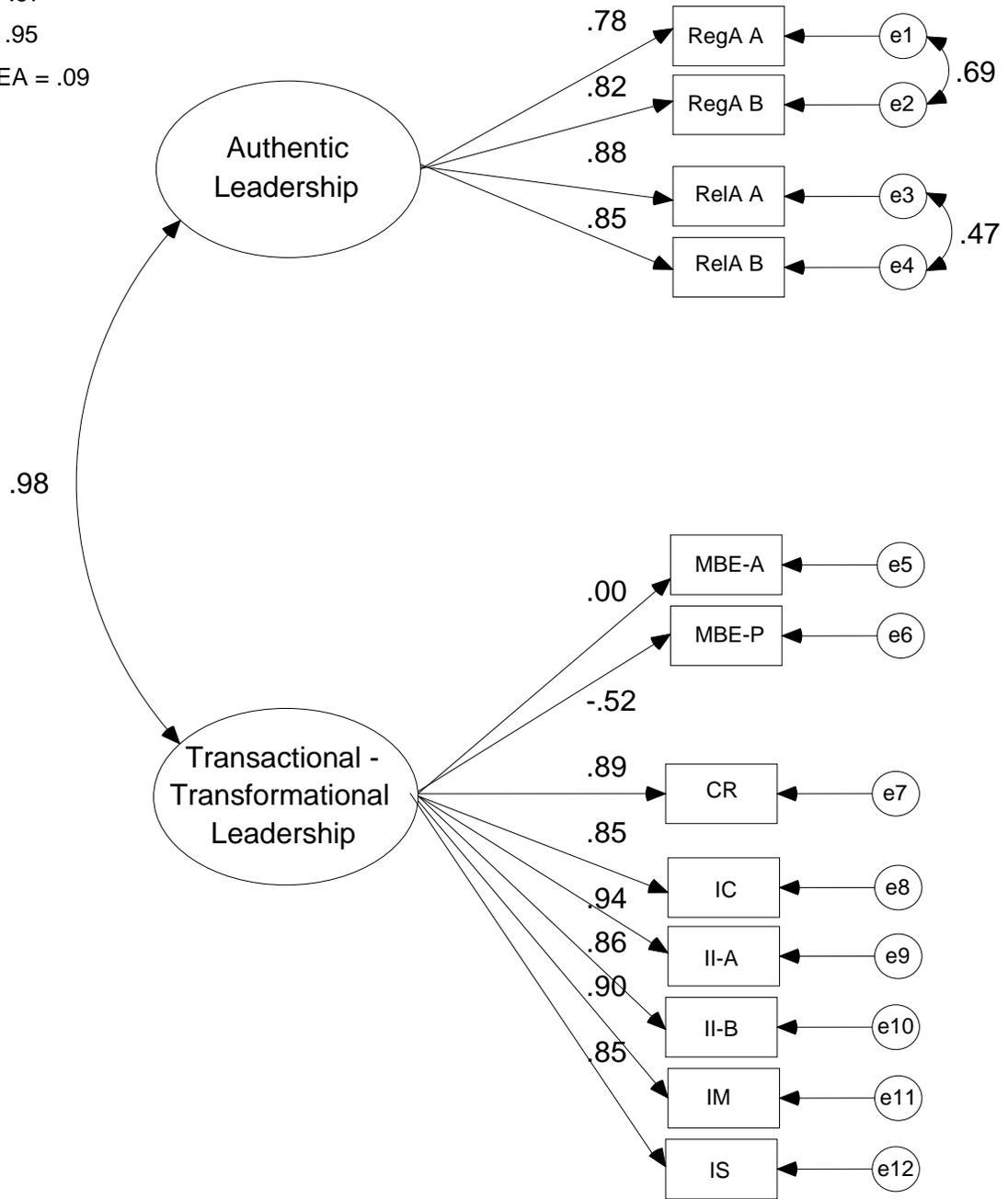


Figure 6. Model and standardized estimates for authentic-transformational model (Model 4).

Chi-square = 151.55 (51 df)

p = .00

Normed chi-square = 2.97

CFI = .97

TLI = .95

RMSEA = .08

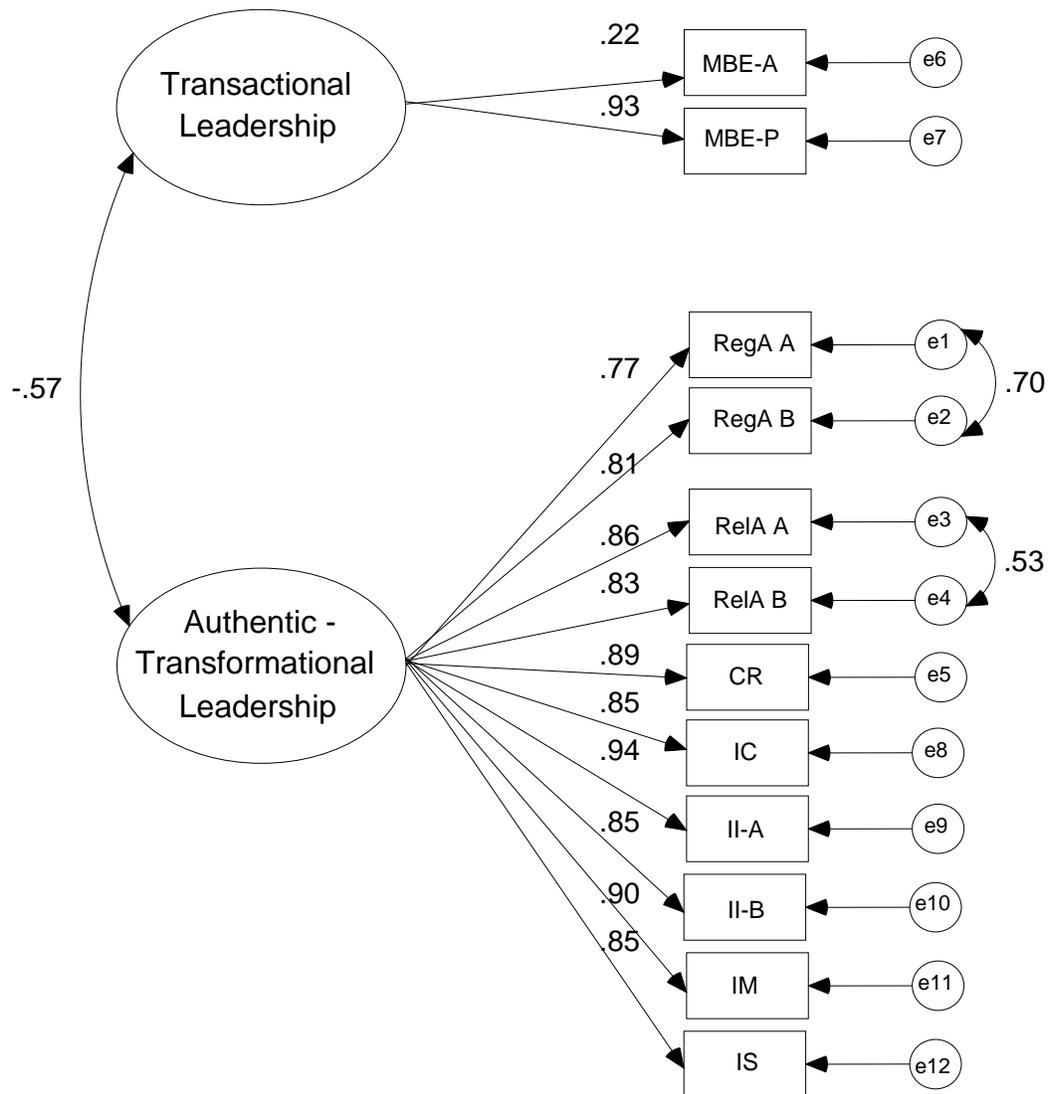


Figure 7. Model and standardized estimates for authentic-transactional model (Model 5).

Chi-square = 143.40 (51 df)

p = .00

Normed chi-square = 2.81

CFI = .97

TLI = .96

RMSEA = .08

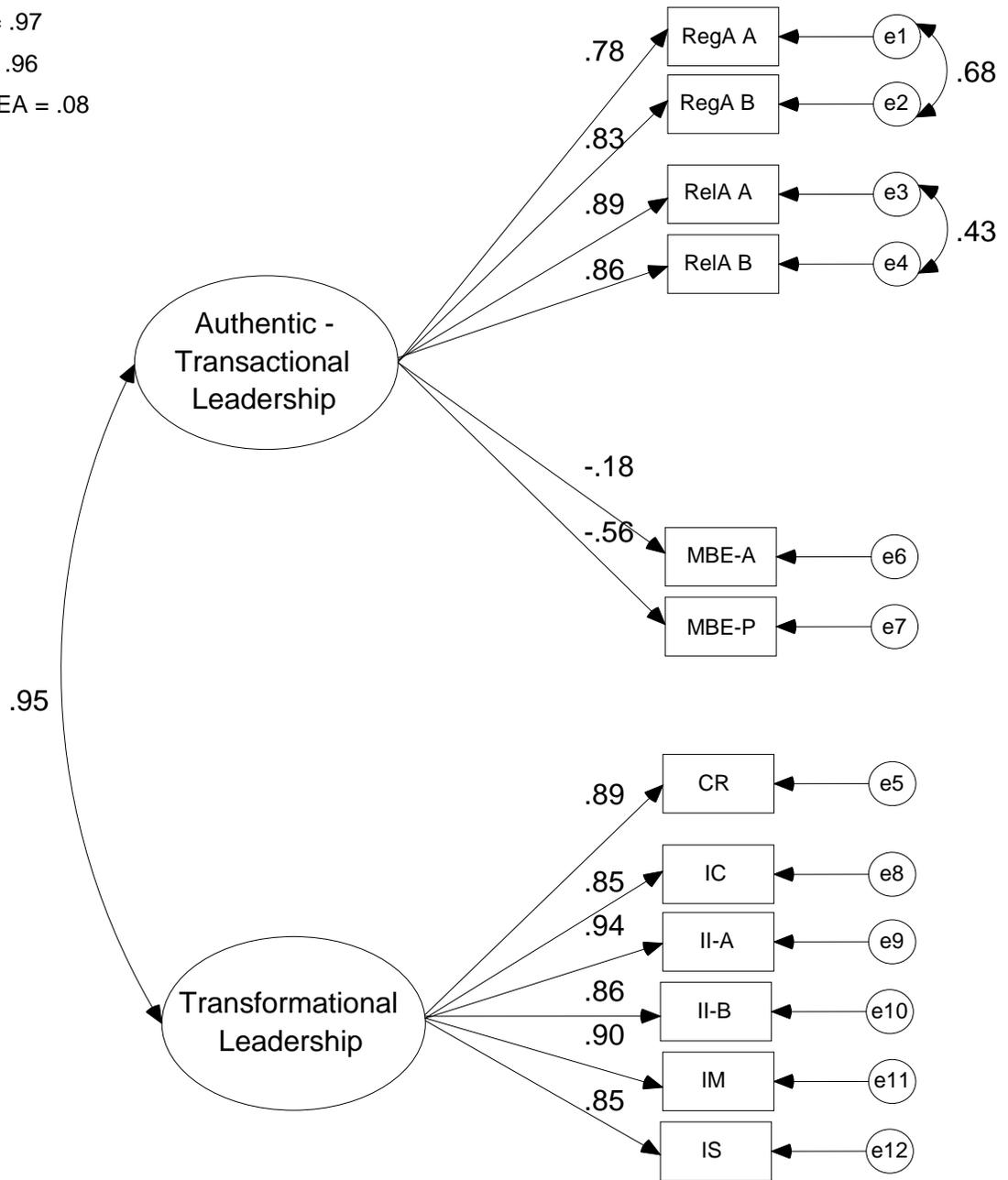


Figure 8. Model and standardized estimates for leadership factor model (Model 6).
 Chi-square = 159.21 (52 df)

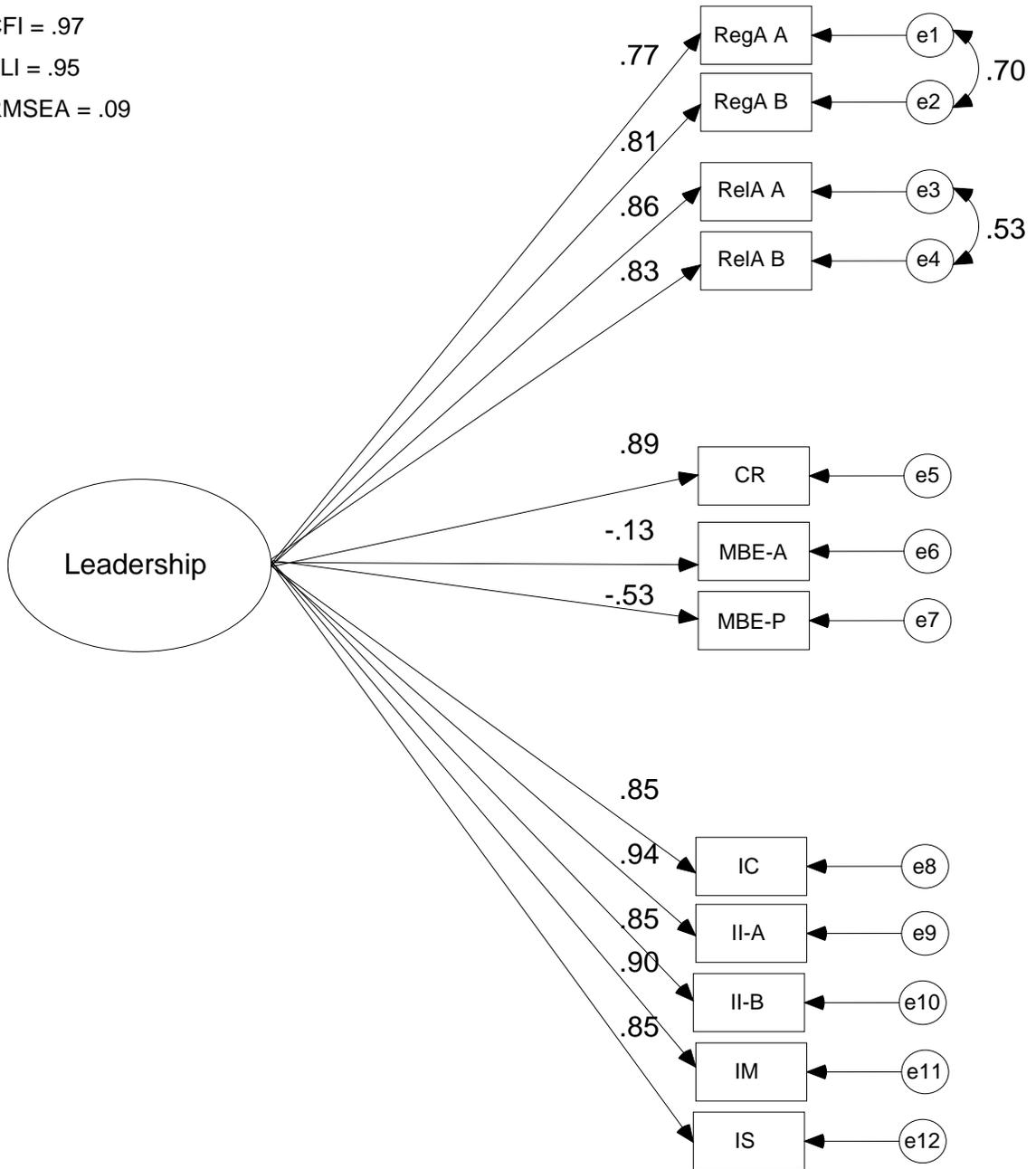
p = .00

Normed chi-square = 3.06

CFI = .97

TLI = .95

RMSEA = .09



authenticity). For the latter, EFA results were used to create indicators by rank-ordering the 7 relational authenticity and 13 regulatory authenticity items by loading size, and splitting these into two groups (highest loading into group A, second highest into group B, third highest into group A, fourth into group B, etc.). This produced 2 indicators that contained the highest loading items for relational and regulatory authenticity. These subscales and item parcels were used in the alternative hypothesized model as well as each of the comparative models.

In initial analyses, none of the models reached the acceptable levels of fit outlined by Browne and Cudeck (1993). In examining the modification indices, it was determined that correlating the error variables for the regulatory and relational authenticity item parcels would result in incremental fit for each model. This makes sense theoretically, as the item parcels are alternative forms of the same variable, and therefore their error variables should be expected to covary (see Arbuckle, 2008 pp. 106-107). Adding this constraint resulted in more acceptable levels of fit for all 6 models. Additionally, contingent reward produced greater model fit when serving as an indicator of transformational leadership instead of transactional leadership, and was therefore used as an indicator of transformational leadership for Models 2 – 6.

Fit statistics for each model are shown in Table 3. As can be seen, Model 2 ($\chi^2_{(49)} = 126.81$, normed $\chi^2 = 2.59$, CFI = .98, TLI = .96, RMSEA = .08) appeared to have slightly better fit than any of the alternative models ($\chi^2_{(49-51)} = 143.40 - 160.04$, normed $\chi^2 = 2.81 - 3.14$, CFI = .97 - .98, TLI = .95 - .96, RMSEA = .08 - .09). This provides support for the idea that authentic, transactional, and transformational leadership are

Table 3

Fit statistics for pilot 2 hypothesized and alternative models.

Model	χ^2	df	χ^2/df	CFI	TLI	RMSEA
H1 Model	152.38	49	3.11	.97	.95	.09
Model 2	126.81	49	2.59	.98	.96	.08
Model 3	160.04	51	3.14	.97	.95	.09
Model 4	151.55	51	2.97	.97	.95	.08
Model 5	143.40	51	2.81	.97	.96	.08
Model 6	159.21	52	3.06	.97	.96	.09

distinguishable factors, at least when contingent reward is treated as an indicator of transformational leadership. However, a closer examination of the factor correlations in this model reveals that, while both authentic and transformational leadership are relatively distinguishable from transactional leadership ($R = -.87$ and $-.70$, respectively), the authentic and transformational leadership factors are not distinguishable ($R = .97$).

Given these conflicting results, it was necessary to conduct further exploratory analyses to gain a better understanding of the relationship between authentic and transformational leadership. Therefore, I compared the relationship between these two leadership styles and three dimensions of leader impression management: self-promotion, intimidation, and ingratiation (Gardner & Cleavenger, 1998). As defined by Jones and Pittman (1982), self-promotion is behavior that presents the actor as highly competent with regards to certain skills and abilities, intimidation is behavior that presents the actor as a dangerous person who is able and willing to inflict pain on the audience, and ingratiation is behavior that makes the actor appear more attractive and likeable to others. Recall that Bass and Steidlemeier (1999) argued that transformational leadership can take two forms – those who genuinely care for the well-being of their followers and the

organization at large (i.e., authentic transformational leaders), and those who give the outward appearance of caring for their followers and the organization, while their true motivation is personal gain (i.e., pseudo-transformational leaders). Also recall that authentic leaders have been described as “knowing their own values as well as those of others” and having “high moral character” (Avolio et al., 2004). Thus, authentic leaders, by definition, are concerned about their subordinates, while transformational leaders can *choose* to be more concerned about subordinates or more concerned about themselves.

If transformational leaders are indeed more concerned about themselves, it follows that they would more likely modify their behavior in order to elicit favorable impressions from others. Thus, leader impression management is an area where authentic and transformational leadership may diverge. Specifically, transformational leaders may engage in greater self-promotion, intimidation, and ingratiation in order to advance their own self-interests (e.g., Snyder, 1987), possibly at the expense of the follower (e.g., Bass & Steidlmeier, 1999). Thus, I examined whether transformational leadership had stronger relationships with impression management than authentic leadership.

To test the relationships between these two forms of leadership and impression management, 2 models were compared for each of the 3 forms of impression management (see Appendix K for models and standardized estimates). In the first model, the parameters for the relationships between both leadership variables and the impression management variable were freely estimated. In the second model, these parameters were constrained to be equal. As in the previous analyses, item parcels and subscale scores were used as indicators in order to limit the number of observed variables, and the error

variables for the regulatory and relational authenticity item parcels were correlated. If the model fit for the freely estimated models was better than the fit for the equal constraint versions, this would provide support for the idea that these two forms of leadership were not equally related to the impression management variable in question.

Fit statistics for the freely estimated and equal constraint models are shown in Table 4. As can be seen, the freely estimated models for self-promotion, intimidation, and ingratiation ($\chi^2 = 202.72, 212.50, \text{ and } 428.32$, respectively) had significantly better fit than the alternative equal constraint models ($\chi^2 = 242.86, 243.42, \text{ and } 431.48$, respectively). This provides general support for the idea that authentic and transformational leadership are not equally related to impression management. However, the heavy overlap between the authentic and transformational leadership factors ($R = .96 - .97$) precludes any determination that these two variables are themselves distinguishable. Thus, it seems that although authentic and transformational leadership may function differently when compared with other variables, they are not statistically distinguishable when compared to one another.

Table 4

Fit statistics for impression management comparison models.

Model	χ^2	<i>df</i>	χ^2/df	CFI	TLI	RMSEA
Self-promotion, freely estimated	202.72	72	2.82	.97	.96	.08
Self-promotion, equal constraint	242.86	73	3.33	.95	.94	.09
Intimidation, freely estimated	212.50	72	2.95	.96	.95	.08
Intimidation, equal constraint	243.42	73	3.33	.95	.94	.09
Ingratiation, freely estimated	428.32	130	3.30	.92	.91	.09
Ingratiation, equal constraint	431.48	131	3.29	.92	.91	.09

Note. All $\Delta \chi^2$ between freely estimated and equal constraint models were significant at the .01 level.

To summarize, findings from the second pilot provide additional information regarding the relationship between authentic leadership and similar leadership styles. First, the authentic leadership scale that was arrived at through exploratory analyses in the first pilot was further validated through confirmatory factor analyses using a separate sample. Second, authentic and transformational leadership were found to be distinguishable from transactional leadership when contingent reward was treated as an indicator of transformational leadership. Third, authentic and transformational leadership were differentially related to the self-promotion, intimidation, and ingratiation dimensions of impression management. However, when authentic and transformational leadership were directly compared, these two forms of leadership were not easily teased apart. Although these findings support the idea that authentic leadership has both similar and distinct components when compared with other popular leadership forms (e.g., Avolio & Gardner, 2005), given the heavy overlap between these two constructs, the general conclusion that can be reached is that authentic and transformation leadership are not statistically distinguishable.

Results

As a general warning against getting caught up in the popularity of the authentic leadership construct, Cooper et al (2005) state specifically that “before designing strategies for authentic leadership development, scholars in this area need to give careful consideration to four critical issues: (1) defining and measuring the construct, (2) determining the discriminant validity of the construct, (3) identifying relevant construct outcomes (i.e., testing the construct’s nomological network), and (4) ascertaining whether authentic leadership can be taught” (p. 477). A definition was given and an initial measure of authentic leadership was developed in the first phase of this project. Through pilot testing, the initial measure was refined and validated. Additionally, pilot tests have begun to shed light on the issue of convergent and discriminant validity between authentic and other leadership forms. Thus, the first and second of the authors’ concerns have been addressed both theoretically and empirically. The primary study looked to address the third. That is, the primary purpose of this study was to examine the nomological network of authentic leadership.

To complete the study, subordinates were asked to rate their supervisor, or their relationship with their supervisor, on authentic leadership, transformational leadership, general leader impression, satisfaction with the leader, affective supervisor commitment, collective identity, and trust in the leader, and to rate themselves on positive psychological capital and workplace deviance. Supervisors were asked to rate the

Table 5

Correlations and scale reliabilities for primary study variables.

Variable	1	2	3	4	5	6	7	8	9	10
1. ATL	(.97)									
2. GLI	.90	(.92)								
3. Sat.	.85	.73	(.88)							
4. ASC	.82	.86	.70	(.88)						
5. CI	.77	.75	.65	.74	(.86)					
6. Trust	.86	.88	.74	.76	.82	(.87)				
7. PsyCap	.58	.49	.53	.52	.49	.53	(.92)			
8. ETP	.40	.27	.26	.40	.32	.26	.30	(.88)		
9. OCB	.35	.25	.30	.31	.32	.24	.30	.92	(.94)	
10. WD	-.32	-.22	-.30	-.23	-.28	-.25	-.46	-.13	-.07	(.91)

Note. $p < .01$ for all relationships except those italicized. ATL = authentic-transformational leadership; GLI

= general leader impression; Sat. = satisfaction with leadership; ASC = affective supervisor commitment;

CI = collective identity; Trust = trust in leadership; PsyCap = positive psychological capital; ETP =

employee task performance; OCB = organizational citizenship behavior; WD = workplace deviance.

subordinates' task performance and organizational citizenship behavior (see Table 5 for correlations and scale reliabilities for all study variables; see figures 9 and 10 for measurement models for subordinate- and supervisor-rated variables, respectively).

As a result of pilot testing, it did not appear that authentic and transformational leadership were empirically distinct constructs. Therefore, direct comparisons of authentic versus transformational leadership were not conducted in the primary study. Rather, the proposed model was tested using a combined authentic-transformational leadership variable. This was a single latent variable with a total of 9 indicators: the 5 subscales of transformational leadership (i.e., average scores for individual consideration, idealized influence-attributed, idealized influence-behavioral, inspirational motivation, and intellectual stimulation) and the 4 item parcels for authentic leadership (2 regulatory, 2 relational authenticity). Recall Bass and Steidlmeier's (1999) argument that

Figure 9. Measurement model for subordinate-rated variables.

Fit Statistics
 Chi-square = 961.49 (532 df)
 p = .00
 Normed chi-square = 1.81
 CFI = .90
 TLI = .89
 RMSEA = .08

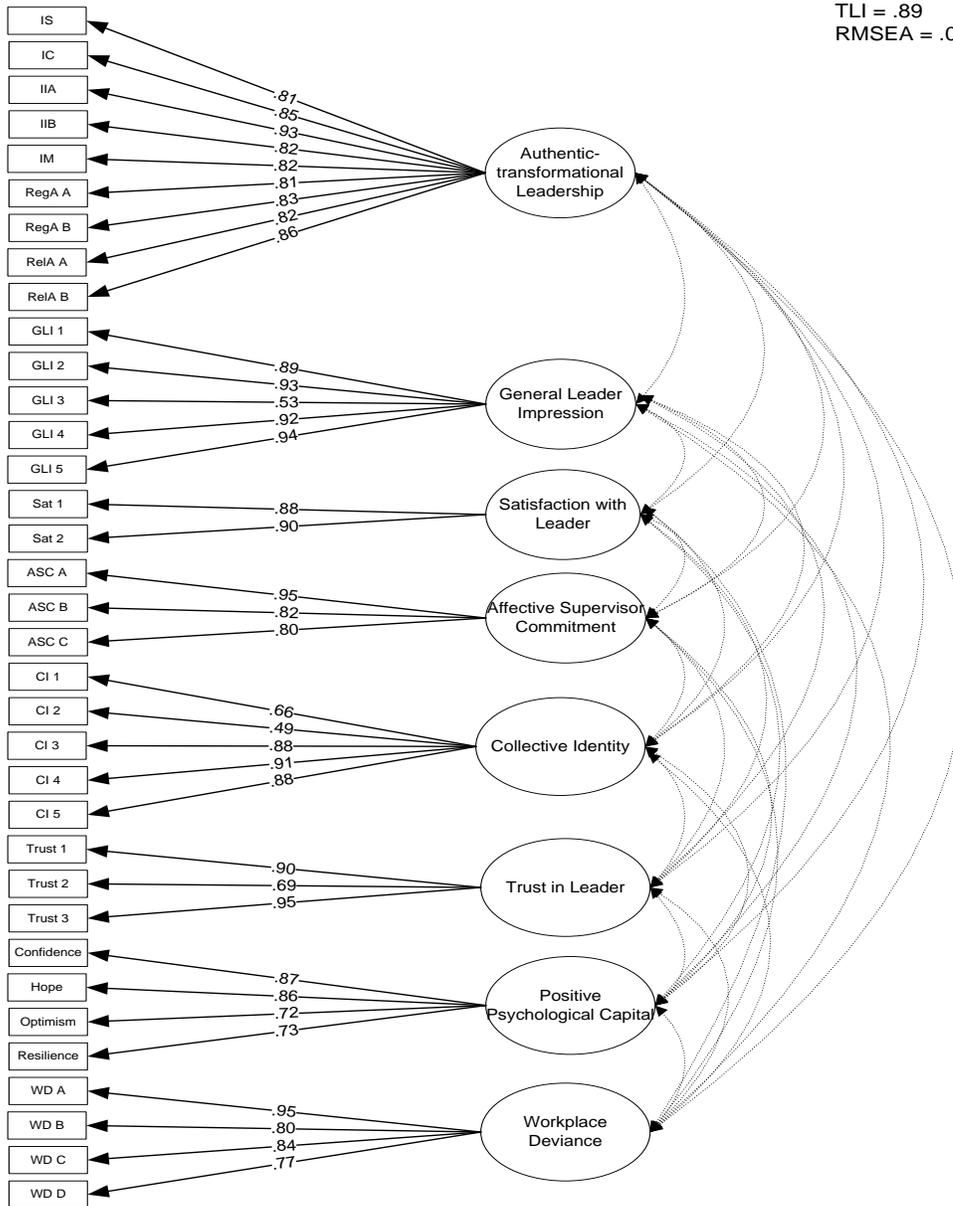


Figure 10. Measurement model for supervisor-rated variables.

Fit Statistics

Chi-square = 46.07 (19 df)

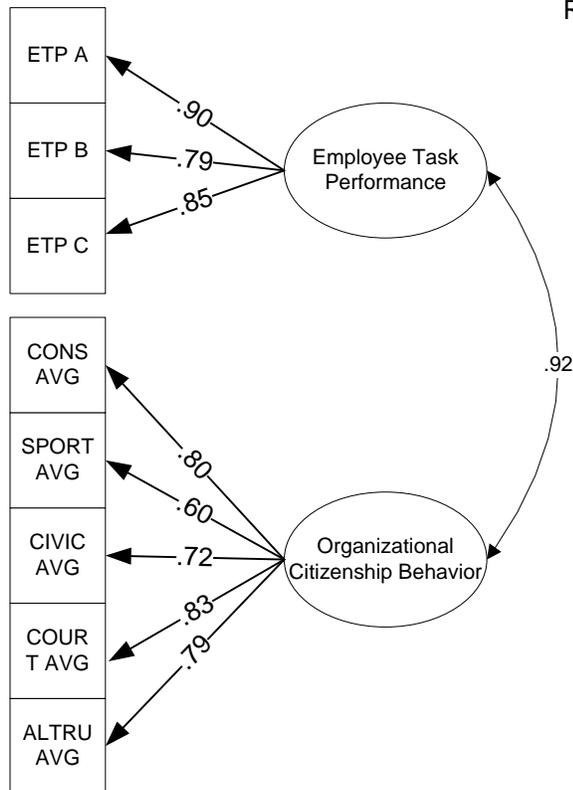
p = .00

Normed chi-square = 2.43

CFI = .96

TLI = .94

RMSEA = .10



transformational leadership is itself morally neutral, and that transformational leaders can fall into one of two categories, authentic and pseudo-transformational. Furthermore, they state that “if transformational leadership is authentic and true to the self and others, it is characterized by high moral and ethical standards in each of the dimensions” (p. 191). The authentic-transformational leadership factor in the primary study is a combination of the five dimensions of transformational leadership, as well as regulatory and relational authenticity—two factors that capture the leader’s moral and ethical thoughts and behaviors and the manifestation of these thoughts and behaviors through interactions with others. Thus, this factor can be seen as representing Bass and Steidlmeier’s conceptualization of the “authentic” transformational leader. Therefore, while the proposed hypotheses were not directly tested, using the latent authentic-transformational leadership variable still allowed the researcher to examine the indirect effects of authentic leadership (i.e., when combined with transformational leadership), as well as the nomological network of an “authentic” transformational leadership variable, which has been proposed, but not empirically examined, in past research (e.g., Aristotle, 1985; Bass & Steidlmeier, 1999; Price, 2003).

Because direct comparisons were not made between authentic and transformational leadership, Hypotheses 2 - 7 were not directly testable. Instead, part (b) for H2, 3, 4, and 6 was removed from consideration, and part (a) was tested using the modified authentic-transformational leadership variable. Thus, a direct path was drawn from authentic-transformational leadership to each of the following endogenous variables: general leader impression, satisfaction with leadership, affective supervisor

commitment, collective identity, trust in leadership, and positive psychological capital. Hypotheses 8, 9, and 10 were still testable, with authentic-transformational leadership functioning as the leadership style in the model. For H8, paths were drawn from (a) affective supervisor commitment, (b) trust in the leader, and (c) positive psychological capital to a latent employee task performance variable. For H9, paths were drawn from (a) collective identity and (b) trust in the leader to a latent organizational citizenship behavior variable. Finally, for H10, a path was drawn from collective identity to a latent workplace deviance variable.

To simplify the models, adjustments were made to reduce the number of observed variables. As in previous analyses, transformational leadership subscales and authentic leadership item parcels were used as indicators for the exogenous authentic-transformational variable. For the endogenous variables, subscale averages were used as indicators for positive psychological capital and organizational citizenship behavior. Item parcels were also created for variables with greater than five indicators, but no subscales (e.g., affective supervisor commitment, employee task performance, workplace deviance). Specifically, three item parcels were created as indicators for affective supervisor commitment and employee task performance, as this is the necessary number of parcels in order to ensure that the model is identified (Kline, 2004). Because workplace deviance had 19 items, 4 item parcels were created as indicators for this variable. All item parcels were populated by conducting a CFA, and then placing items into parcels based on the item loadings for the first factor that emerged (i.e., highest factor loading into parcel 1, second highest into parcel 2, third highest into parcel 3,

fourth highest back into parcel 1, etc.). The average score for each item parcel was used as an indicator for the respective variable. For general leader impression, satisfaction with the leader, collective identity, and trust in the leader, individual items were used as indicators.

As was the case in pilot 2, an initial examination of the model indicated that the levels of fit were below the acceptable levels outlined by Browne and Cudeck (1993). Modification indices suggested that the error variables for regulatory and relational authenticity should be correlated, as in the pilot analyses. The modification indices also suggested that the error variables for employee task performance and organizational citizenship behavior should be correlated to produce better fit. This makes sense theoretically, as these two variables are both indicators of effective job performance. Furthermore, these were the only two variables that were reported on by the supervisor, and therefore, the relationship between the two could be due to common method variance. As a result this initial examination, these three modifications were made to the model.

To test the modified Hypotheses 2 - 7, a model was examined with the distal outcomes of task performance, OCB, and workplace deviance excluded (see Figure 11). As all 6 of these hypotheses involved direct relationships between the exogenous and endogenous variables, competing models were not appropriate for the model. Rather, fit statistics were examined in absolute terms against commonly accepted fit criteria (i.e., normed $\chi^2 < 3$, CFI and TLI values close to 1, RMSEA $< .1$; Carmines & McIver, 1981; Bentler & Bonnett, 1980; Bentler, 1990; Browne & Cudeck, 1993). Thus, if the model

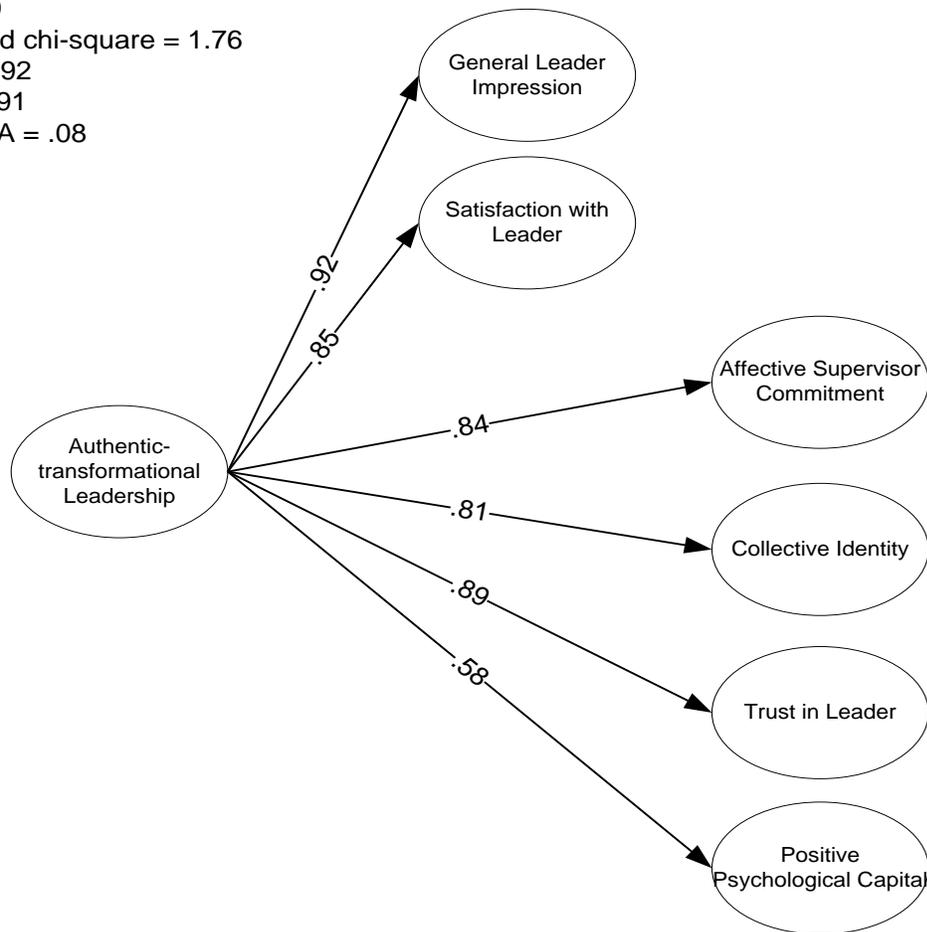
had good fit to the data, this would provide support for H2-H7. As can be seen in Figure 11, the model met the acceptable criteria for fit (normed $\chi^2 = 1.76$, CFI = .92, TLI = .91, RMSEA = .08). Thus, modified Hypotheses 2 – 7 were fully supported by the data.

To test Hypotheses 8 – 10, the fit of the full hypothesized model (see Figure 12) was compared against that of multiple alternative models. For each hypothesis, the

Figure 11. Model for modified Hypotheses 2 – 7.

Fit Statistics

Chi-square = 750.94 (426 df)
p = .00
Normed chi-square = 1.76
CFI = .92
TLI = .91
RMSEA = .08



hypothesized model was compared to an alternative model that included a direct path from authentic-transformational leadership to the respective behavioral outcome variable. For H8, the alternative model included a direct path to employee task performance (see Figure 13). For H9, a direct path was included to OCB (see Figure 14). For H10, a direct path was included to workplace deviance (see Figure 15). The change in model fit (via change in χ^2) was examined for each model comparison. If the inclusion of the direct path did not result in significantly improved fit over the hypothesized model, this would provide support for the hypothesis in question.

Fit statistics for the hypothesized model and each of the alternative models are provided in Table 6. As can be seen, the hypothesized model had acceptable fit statistics overall, with normed $\chi^2 = 1.64$, CFI = .90, TLI = .89, and RMSEA = .07. Additionally, this model accounted for 15% of variance in employee task performance, 9% of the variance in organizational citizenship behavior, and 9% of the variance in workplace deviance. For H8, the alternative model did not have significantly better fit to the data than the hypothesized model ($\Delta\chi^2_{(1)} = .83$, *ns*). Therefore, the relationship between leadership style and employee task performance was fully mediated by follower motivation. To identify which specific motivation variables functioned as mediators, it was necessary to examine the significance of each predictor-mediator and mediator-outcome relationships. According to Baron and Kenny (1986), mediation requires a significant relationship between both the predictor and the mediator and between the mediator and the outcome variable. Although there was a significant relationship between

Figure 12. Hypothesized model for primary study with authentic-transformational leadership variable.

Fit Statistics

Chi-square = 1386.80 (845 df)

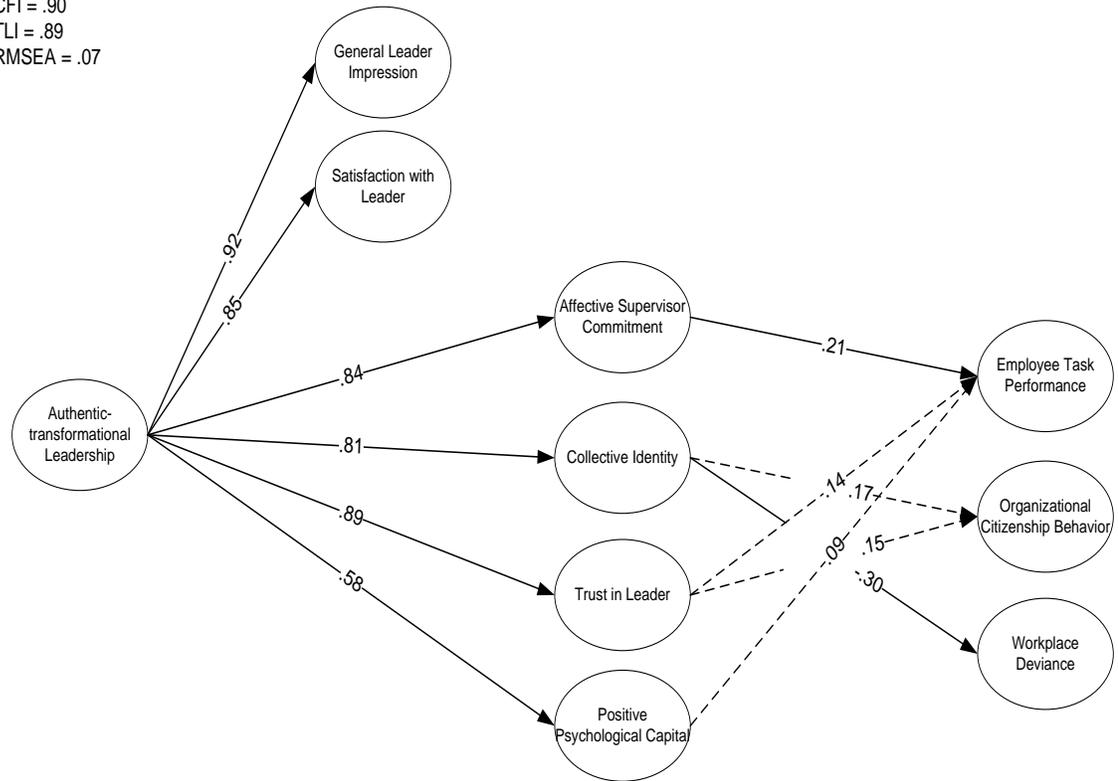
$p = .00$

Normed chi-square = 1.64

CFI = .90

TLI = .89

RMSEA = .07



Note: Straight line = relationship is significant at $p < .05$. Dashed line = relationship is not significant at $p < .05$.

Figure 13. Alternative model for Hypothesis 8.

Fit Statistics

Chi-square = 1385.97 (844 df)

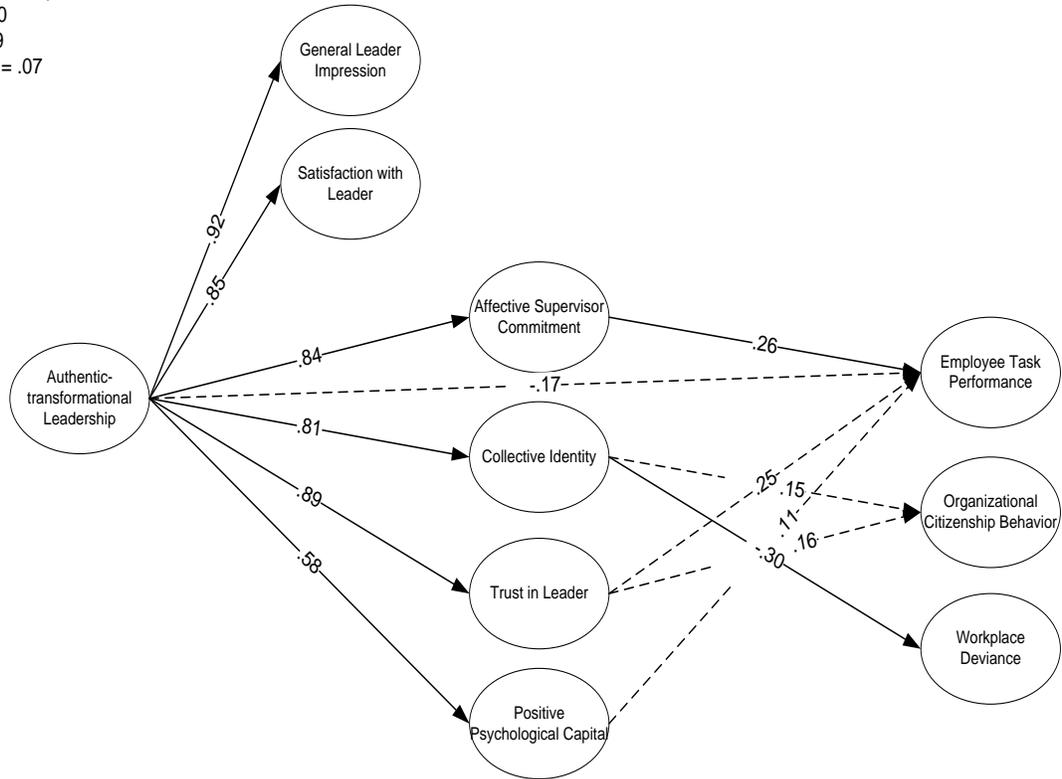
p = .00

Normed chi-square = 1.64

CFI = .90

TLI = .89

RMSEA = .07

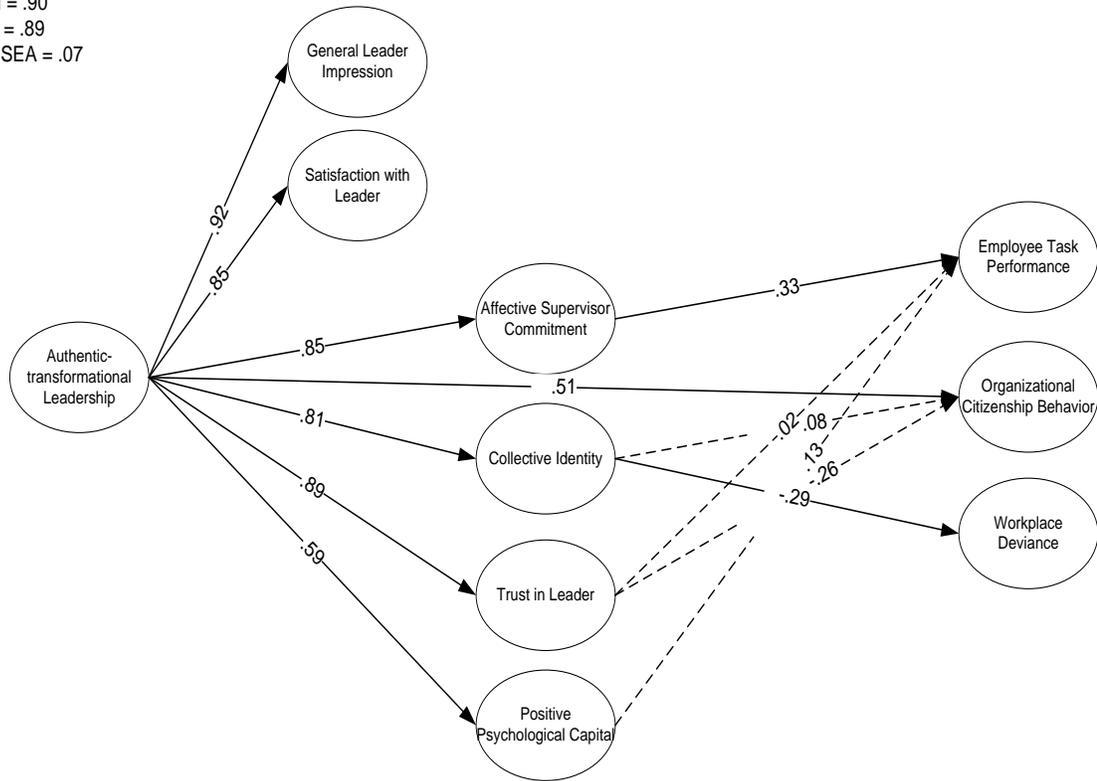


Note: Straight line = relationship is significant at $p < .05$. Dashed line = relationship is not significant at $p < .05$.

Figure 14. Alternative model for Hypothesis 9.

Fit Statistics

Chi-square = 1378.87 (844 df)
 p = .00
 Normed chi-square = 1.63
 CFI = .90
 TLI = .89
 RMSEA = .07



Note: Straight line = relationship is significant at $p < .05$. Dashed line = relationship is not significant at $p < .05$.

Figure 15. Alternative model for Hypothesis 10.

Fit Statistics

Chi-square = 1384.47 (844 df)

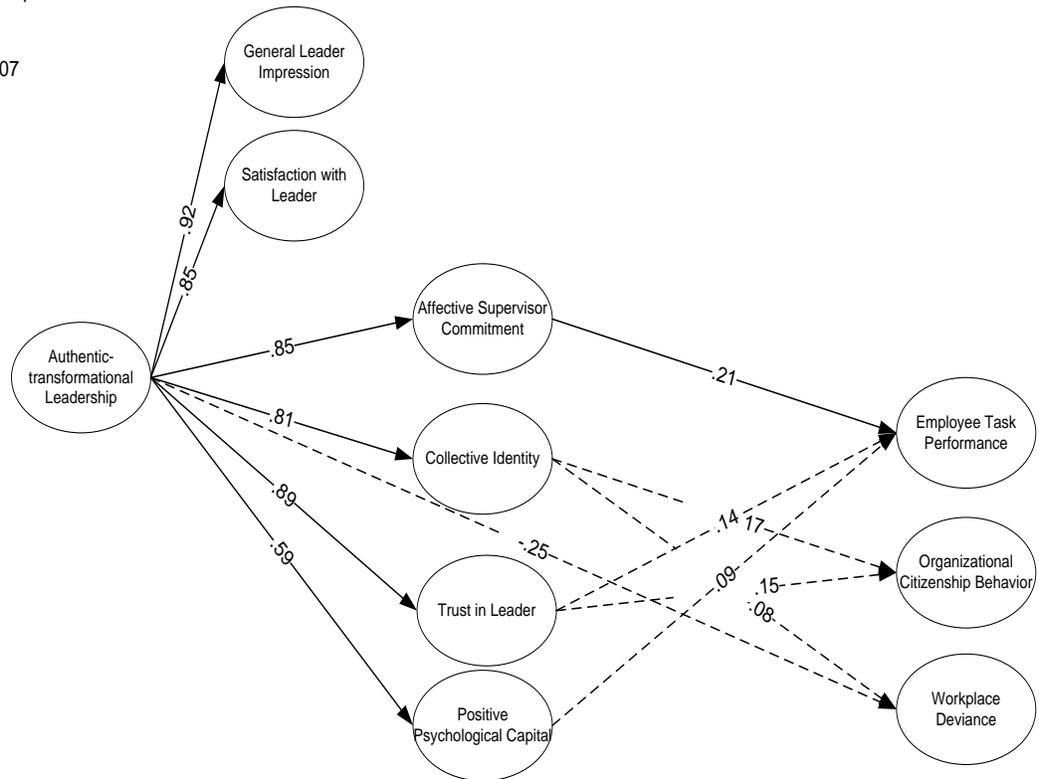
$p = .00$

Normed chi-square = 1.64

CFI = .90

TLI = .89

RMSEA = .07



Note: Straight line = relationship is significant at $p < .05$. Dashed line = relationship is not significant at $p < .05$.

Table 6

Fit statistics for Hypotheses 8 - 10.

Model	χ^2	<i>df</i>	χ^2/df	CFI	TLI	RMSEA	$\Delta\chi^2$
Hypothesized Model	1386.80	845	1.64	.90	.89	.07	--
H8 Alternative Model	1385.97	844	1.64	.90	.89	.07	.83
H9 Alternative Model	1378.87	844	1.63	.90	.89	.07	7.93*
H10 Alternative Model	1384.47	844	1.64	.90	.89	.07	2.33

* $p < .05$

authentic-transformational leadership and all three follower motivation variables (affective supervisor commitment, trust in the leader, positive psychological capital), only affective supervisor commitment had a significant relationship ($\beta = .21, p < .05$) with employee task performance. Therefore, affective supervisor commitment fully mediated the relationship between leadership and employee task performance, while trust and positive psychological capital did not. Thus, H8 was partially supported by the data.

For H9, the alternative model had significantly better fit than the hypothesized model ($\Delta\chi^2_{(1)} = 7.93, p < .05$). Additionally, this model accounted for a greater percentage of variance for the outcome variables, with 18% of the variance in employee task performance, 14% of the variance in organizational citizenship behavior, and 9% of the variance in workplace deviance accounted for in the model. Furthermore, both collective identity ($\beta = .17, ns$) and trust in the leader ($\beta = .15, ns$) had non-significant relationships with the outcome variable, OCB. Therefore, the relationship between leadership style and OCB was not mediated by collective identity and trust in the leader. Thus, Hypothesis 9 was not supported.

Finally, for H10, the alternative model did not have significantly better fit to the data than the hypothesized model ($\Delta\chi^2_{(1)} = 2.33, ns$). Furthermore, significant relationships existed between leadership and collective identity as well as between

collective identity and workplace deviance ($\beta = -.30, p < .05$). Therefore, the relationship between leadership style and workplace deviance was fully mediated by collective identity. This provided full support for Hypothesis 10.

Discussion

The concept of authentic leadership has been given a fair amount of attention in both academic and corporate circles throughout the last decade. However, empirical examination of this concept is lacking. The current study looked to close this gap through the development of an authentic leadership measure and a glimpse into the nomological network of this new construct. A new measure for authentic leadership was developed and validated through pilot testing. Through additional analyses using this new measure, it was discovered that authentic and transformational leadership were not empirically distinct. However, by combining these two measures into an authentic-transformational leadership construct, it was still possible to examine the effect of greater amounts of authenticity in the leadership role. It was found that authentic-transformational leadership was directly related to a number of employee attitudes, and these, in turn, were related to employee behaviors. There are both theoretical implications and practical applications for these findings.

Theoretical Implications

Authentic-transformational leadership as a construct. First, and perhaps most importantly, findings from the study provide empirical evidence for the convergent versus discriminant validity debate between authentic and transformational leadership. Recall Avolio and Gardner's (2005) contention that "there should be convergent validity between ... transformational and authentic leadership, but it is important that we build the case for discriminant validity as well" (p. 329). Also recall Cooper et al.'s (2005)

warnings against getting too caught up in the popularity of authentic leadership, as well as their counsel to ensure the separateness of this construct prior to promoting its development. Specifically, these authors argue that “the critical test is not whether research can distinguish the authentic leadership construct in a theoretical discussion, but whether this construct can be distinguished from other similar constructs empirically, using commonly accepted psychometric methods for determining discriminant validity” (p. 481). Considering the extremely high level of overlap between authentic and transformational leadership found using commonly accepted psychometric methods (e.g., EFA, CFA, SEM) in the current study, it would seem that further promotion of authentic leadership development (ALD; Avolio & Gardner, 2005) is premature at best, but more likely unnecessary. Thus, based on these findings, it is suggested that a moratorium be placed on authentic leadership development until this construct has been examined in additional studies with similar rigor. For now, the theoretical components of authentic leadership have resulted in positive results when added to transformational leadership. Perhaps this is the best value that the concept of authentic leadership will bring to the field of leadership research.

Although no measure was in existence when my research began, a recent article by Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008) includes the development and validation of an authentic leadership measure. The authors used the same conceptualizations of the authentic leadership construct (e.g., Avolio & Gardner, 2005; Gardner, et al., 2005; Ilies, et al., 2005) as in the current study, and initially viewed the construct as having the same five dimensions: positive moral perspective, self-

awareness, balanced processing, relational transparency, and authentic behavior (p. 95). Methods for item generation were also similar, as the authors used an extensive review of the literature and dissertations to generate items. However, methods for the initial validation of the scale were different in that, rather than conducting an Exploratory Factor Analysis to infer dimensionality of the scale, researchers in this study used a sorting procedure and inter-rater reliability estimates to eliminate items for each of four theoretical dimensions. Thus, in initial pilot testing, the authors arrived at a 16-item, 4-factor scale (reliability not available), whereas I arrived at a 20-item, 2-factor scale ($\alpha = .95$).

Similar to the current study, the authors compared authentic leadership to transformational leadership. They found positive, significant correlations between all dimensions of authentic leadership and all dimensions of transformational leadership. In addition, the authors compared a model where the relationship between authentic leadership and transformational leadership was constrained to 1.0, to one where this relationship was freely estimated, and found significantly better fit for the latter. They concluded that this supports discriminant validity between the two constructs, yet failed to report the factor correlation between the two. In exploratory analyses, I found similar results for constrained and freely estimated models, but also found an overwhelmingly positive correlation ($R = .96 - .97$) between the two factors. Therefore, despite better fit for the freely estimated model, I concluded that these two leadership constructs were not empirically distinct. Perhaps Walumbwa et al. had similar results, but failed to report these results in their study. Regardless, the fact that each dimension of authentic

leadership had significant, positive relationships with each dimension of transformational leadership should have been evidence enough that these two constructs were not empirically distinguishable.

Perhaps the best value that authentic leadership brings to the literature is that adding authentic leadership components to the existing transformational leadership construct helps address some of the ethical issues associated with this leadership style. That is, the authentic leadership components help to distinguish between true transformational leaders and those who are exhibiting transformational leader behaviors for self-serving purposes. As noted by Bass and Steidlmeier (1999), transformational leaders, by definition, exhibit idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. However, these are values-neutral behaviors, and the ultimate goal of the leader in exhibiting these behaviors is not taken into consideration. Therefore, transformational leaders can also be deceptive, self-serving, impulsive, manipulative, and harmful to followers, and still be transformational. Authentic-transformational leaders, on the other hand, exhibit these values-neutral transformational behaviors, but these behaviors are also tempered by positive morals and a deep sense of self (i.e., regulatory authenticity), as well as openness and truthfulness in relationships (i.e., relational authenticity). Therefore, by definition, authentic-transformational leaders are not deceptive, self-serving, impulsive, manipulative, or harmful to followers.

These differences are apparent in any of the four values-neutral dimensions of transformational leadership. For example, the transformational leader may show

individualized consideration by having a one-on-one discussion with a follower, and recommending classes or programs that will help the follower develop in his or her role. However, while it may seem to the follower that the leader is concerned for the follower's well-being, the leader's actual motivation may be to develop the follower into a role that maintains the power distance between the two. On the other hand, an authentic-transformational leader would show the same individualized consideration by having a personal development discussion with the follower, however, the leader would either be compelled to let the follower know the nature of the role (i.e., relational authenticity), or would gear the follower's development toward the leader's own succession (i.e., regulatory authenticity).

These differences apply to both organizational and world leaders alike. In the political realm, for example, one could distinguish between a charismatic, transformational leader like Adolf Hitler and an authentic-transformational leader like Barack Obama. Hitler used his idealized influence to create a dictatorship and then systematically annihilate millions of Jews. Obama, while having idealized influence that helped him win a Presidential election, also exhibits both regulatory and relational authenticity – a few brief examples being a positive, “Yes We Can!” Presidential campaign (i.e., positive morals), an autobiography about his childhood and upbringing (i.e., deep sense of self), and a realistic financial forecast to the American people in the midst of a brutal recession (i.e., openness and truthfulness). Thus, Obama would be categorized as an authentic-transformational leader. As such, Obama has used his idealized influence for the greater good, which—perhaps providing the greatest contrast

for the effect that these two types of leaders can have on their followers—has recently resulted in a Nobel Peace Prize. Thus, the current research on authentic leadership adds value to the existing transformational leadership framework by introducing a values component, which enables one to distinguish between transformational and authentic-transformational leaders.

The addition of an authenticity component to transformational leadership also addresses many gaps in existing leadership research. For example, recall Kuhnert and Lewis' (1987) argument that leaders transition from a transactional to a transformational style with time in the leadership role. This, they argued, happened in three stages. In the *Imperial/Lower-order Transactional* stage, the leader is motivated by his/her immediate personal goals and agendas. In the *Interpersonal/Higher-order Transactional* stage, interpersonal connections and mutual obligations are used to further advance the leader's goals. Finally, in the *Institutional/Transformational* stage, the leader operates from his or her personal standards and value system in order to achieve long-term personal and organizational goals. These leadership stages are theoretical, and the authors state that the effectiveness of leaders in each stage should be examined and compared. Additionally, the authors call for specific research on the process through which these leaders impact follower performance (p. 654). Results from the current study provide support for the effectiveness of leaders at the Institutional/Transformational stage, in that transformational leaders who operate from their personal value system (i.e., authentic-transformational leaders) were shown to have a positive impact on follower behaviors. Furthermore, results of this study specify some of the process variables (e.g., affective

supervisor commitment, collective identity, trust, positive psychological capital) through which this occurs.

Authentic-transformational leadership and psychological outcomes. Authentic-transformational leadership was found to be directly related to a number of follower perception and follower motivation variables. First, followers with authentic-transformational leaders were more likely to perceive them as ideal leaders (i.e., greater general leader impression). This is in line with research by Endrissat et al. (2007), who found that authenticity was a key component to what is thought of as “leadership” in its most general form. The Endrissat study was a qualitative design, and the authors’ findings have been verified in the current, quantitative study. Considering these similar findings, and that Endrissat et al. is a fairly recent study, it can be concluded that authentic-transformational is an ideal leadership form in the modern day. Thus, those who wish to conduct additional research on the authentic-transformational leadership construct can be more certain of the utility of their findings.

The second follower perception variable related to authentic-transformational leadership was satisfaction with the leader. This provides further support for the research of Judge, Piccolo, and Ilies (2004), who found that leaders who showed more consideration for followers were given higher ratings for follower satisfaction than leaders who just concentrated on initiating structure. Authentic-transformational leaders seek to build open and trusting relationships with followers, and in the process, show high levels of consideration for the follower. Therefore, it is likely that relational authenticity is a major contributing factor for the strong relationship ($r = .85$) between

authentic-transformational leadership and satisfaction with the leader. Taking a closer look at the items, followers rated authentic-transformational leaders highly on the items, “uses methods of leadership that are satisfying,” and “works with me in a satisfactory way.” Combining these findings with the findings for Hypothesis 2, and researchers can begin to see the impression that authentic-transformational leaders make on followers. That is, followers see them as ideal leaders who use favorable leadership methods that are aligned with employee work styles. Considering this, it is no wonder that followers also gave high ratings for motivational factors, a topic that is discussed next.

Authentic-transformational leadership and follower behavior. The first follower motivation variable that was found to be related to authentic-transformational leadership was affective supervisor commitment. As noted in the introduction, not much research exists on this variable. However, findings from this study highlight its importance. First, there was a strong relationship between authentic-transformational leadership and affective supervisor commitment, indicating that individuals with authentic-transformational leaders had high degrees of positive, emotional commitment to the leader. Second, as a result of this commitment, employees had higher levels of task performance. This supports and expands upon the work of Becker and Kernan (2003), who found that affective supervisor commitment was related to task performance when continuance and normative commitment were controlled. Add in the relationship between authentic-transformational leadership and affective supervisor commitment and researchers have a clearer understanding of one of the mechanisms through which leadership affects employee task performance (Shamir, House, & Arthur, 1993).

The second follower motivation variable that was related to authentic-transformational leadership was the follower's collective identity. This provides further support for the link between leader behavior and the follower's sense of collective identity, which has been found in a number of studies (e.g., Shamir et al., 1993; Paul et al., 2001; Van Knippenberg et al., 2004). Furthermore, this answers a call by Van Knippeneberg et al. (2004) for additional research on other leadership factors associated with collective identity. Specifically, transformational leaders who also have high levels of regulatory and relational authenticity are likely to elicit collective identity in their followers. In addition, this sense of collective identity resulted in a lesser degree of workplace deviance for the employee. Thus, there was a direct relationship between authentic-transformational leadership and collective identity, as well as an indirect relationship between this new leadership variable and workplace deviance. Most research on leadership and workplace deviance focus on the negative aspects of the leader (e.g., Hershcovis et al., 2007), which result in a higher degree of deviance. However, the current study offers insight into the positive aspects of the leader, which ultimately result in a lesser degree of deviance. In addition, one of the mechanisms through which this occurs (i.e., collective identity) has been identified, which further clarifies the nature of this relationship.

The third follower motivation variable that was related to authentic-transformational leadership was the follower's trust in the leader. The positive relationship between authentic-transformational leadership and trust in the leader is similar to that found for transformational leadership in previous research. However, recall

that it was originally hypothesized that the addition of authentic components to transformational leadership would result in a greater relationship than that found for transformational leadership alone. Dirks and Ferrin (2002) found a meta-analytic correlation of $\rho = .72$ between transformational leadership and trust. In the current study, a correlation of $r = .89$ was found between authentic-transformational leadership and trust. Thus, it seems that adding the components of regulatory and relational authenticity might indeed make this relationship even stronger. However, additional research is needed in this area to be sure. Another finding from the Dirks and Ferrin meta-analysis that is further supported in the current study is that employee trust was related to employee job performance. As pointed out by the authors, this may be due to the principle of social exchange, where employees are willing to work harder in exchange for the positive treatment they are receiving from the supervisor. Thus, another mechanism through which leadership behavior affects employee job performance (Shamir et al, 1993) has been identified in the current study.

Interestingly, although authentic-transformational leadership was directly related to follower collective identity and trust, and also directly related to the follower outcome variable OCB, neither collective identity nor trust mediated the relationship between leadership and OCB. These findings could be explained by looking at the level of analysis for each pair of variables. Specifically, the significant direct relationship between authentic-transformational leadership and trust, collective identity, and OCB suggest that these leaders develop a greater sense of affinity within the follower for the leader (dyad level), workgroup (group level), and organization (organization level),

respectively. However, it is not through a greater affinity to the leader or workgroup that this latter relationship exists. That is, although authentic-transformational leaders can develop high levels of trust with followers and highly cohesive teams, these factors will not result in greater organizational citizenship behavior from the follower. Rather, it is likely that the relationship between authentic-transformational leadership and OCB is mediated by variables outside of the leader's sphere of influence, such as type of organization (public vs. non-profit), organizational and national culture (extent to which good deeds are appreciated), and even the state of the economy (extent to which followers are in the "mood" to engage in OCB). Thus, although a direct relationship exists in the current study between authentic-transformational leadership and OCB, this relationship may be better explained by third, macro-level variables. What mediators do exist for this relationship is a question to be answered in future research.

The final follower motivation variable that was related to authentic-transformational leadership was the follower's positive psychological capital. As discussed in the introduction, Luthans and Avolio (2003) proposed that positive psychological capital (i.e., confidence, hope, optimism, resilience) could be developed by the follower through positive behavioral modeling of the leader. These authors also describe authentic leaders as confident, hopeful, optimistic, and resilient. Thus, these positive attributes of the leader could be developed and displayed by the follower through time in the leadership role. The current study provided general support for this idea. That is, authentic-transformational leadership was associated with high levels of positive psychological capital in the follower. It is likely that this is attributed more to the

authentic component than the transformational component in the authentic-transformational variable, as purely transformational leaders have not been described as confident, hopeful, optimistic, and resilient. Regardless of the nature of its development, follower positive psychological capital was associated with increased levels of task performance. This finding is supportive of research by Luthans et al. (2007), who found that positive psychological capital was related to job performance. These authors used self-ratings of employee job performance, and this relationship was further supported in the current study through the use of supervisor ratings. Thus, a third mechanism through which leader behavior affects employee job performance (Shamir et al., 1993) was found in the current study.

Practical Applications

Findings from this study can also be applied in the business world. It is a key priority for high-performing organizations to keep their employees motivated and productive. The current study provides practical applications for how this can be done by focusing efforts on a specific leadership style.

First, findings from this study highlight the positive organizational outcomes for developing authentic-transformational leaders. According to Rotundo and Sackett (2002), task performance, organizational citizenship behavior, and workplace deviance represent the three major dimensions of employee job performance. In the current study, authentic-transformational leadership has been indirectly tied to two of the three, task performance and workplace deviance, with both having a great deal of impact on the bottom line.

The importance of high employee task performance is tacit knowledge in most organizations. However, some popular leadership styles have been associated with perceived, but not actual, organizational performance (e.g., Waldman, Ramirez, House, & Puranum, 2001; Tosi, Misangyi, Fanelli, Waldman, & Yammarino, 2004; Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006). For example, Agle et al. (2006) found that CEOs who were perceived to be more charismatic were also perceived to be more effective. However, when looking at actual performance numbers (e.g., stock returns, sales growth, return on assets) there was no statistical link between leader charisma and organizational performance. In a similar study, Waldman et al. (2001) found that highly charismatic CEOs actually performed *worse* than their low charisma counterparts when the business environment was certain (vs. uncertain). Considering these findings, and the fact that employee task performance is inextricably linked to the financial performance of the organization, this study provides assurance that training and development initiatives aimed at producing authentic-transformational leaders will likely result in observable and sustainable performance for the organization. This is because authentic-transformational leaders, while still displaying charisma or idealized influence, will also be open and honest with their followers, will balance both positive and negative performance feedback, and will operate on the basis of positive morals. These factors keep the leader grounded and practical. Thus, an authentic-transformational leader is less likely to develop grandiose visions of future states that, although generating initial excitement, are either difficult or impossible to implement, and ultimately create frustration and burnout from the follower. Rather, the authentic-transformational leader's vision is thorough and

well-defined, and is developed with the interests of the follower in mind. Therefore, the authentic component of authentic-transformational leadership serves as a buffer for the leader's vision, creating actionable and rewarding work for the follower, which ultimately results in greater task performance.

On the opposite side of the job performance spectrum is workplace deviance. However, this construct is also closely tied to the company's financial performance. As pointed out in previous research (e.g., Greenberg, 1997; Murphy, 1993; Vardi & Weitz, 2004), workplace deviance is a major problem for organizations, with estimated annual costs of \$6 billion to \$200 billion in the United States alone. Thus, developing authentic-transformational leaders will also eventually lead to better financial performance through the absence of workplace deviance.

The value of authentic-transformational leadership in an organization has been shown repeatedly in the findings of the current study. As an extension of this, organizations that choose to promote authentic-transformational leadership stand to gain a competitive advantage in the marketplace. Ilies et al. (2005) proposed a number of strategies for increasing authentic leadership in organizations, many of which can also be applied to authentic-transformational leadership. For example, to increase regulatory authenticity, organizations can use the constructs of positive self-concept and emotional intelligence as selection criteria. Furthermore, regulatory authenticity can be developed through the use of multi-source feedback and emotional intelligence training. For relational authenticity, leaders can be selected by assessing past work relationships and past behaviors in a structured interview. This behavior could also be further developed

through the use of upward feedback and informal performance discussions. Similarly to that of the authentic components, selection systems can also be designed to assess the components of transformational leadership (i.e., individual consideration, idealized influence, inspirational motivation, intellectual stimulation). Furthermore, transformational leadership training has been shown to have a positive impact on follower attitudes and financial performance (e.g., Barling, Weber, & Kelloway, 1996). These are just a few examples of strategies that can increase authentic-transformational leadership in organizations, and proper buy-in is needed for any of these strategies to have their intended effects. Findings from the current study could be used to help gain support from organizational decision-makers, thereby ensuring that the proper resources are dedicated to these selection and training initiatives.

Limitations and Future Research

Although the current study findings are important for both theory and practice, there are some limitations that should be addressed. First, both pilot studies were comprised mostly of college students. Although these studies were primarily conducted for scale validation, representation from a more diverse subset of the working population would have enhanced the generalizability of the results. Furthermore, although industry representation varied considerably in the primary data set, all participants were U.S. citizens. Although results of the primary study were promising in general, these results should be applied to other countries and cultures with caution.

Another limitation is the nearly exclusive use of self-report measures. Although task performance and OCB were assessed by using supervisor report, each variable relied

on data from only one source. The use of multiple sources of information would provide greater legitimacy to the important findings from this study by decreasing the risk of mono-method bias, instability of correlation coefficients, and other reporting biases, as discussed by Spector (1994). This is especially true when assessing the concept of authentic leadership. That is, it is not clear who is in the best position to provide ratings for authentic leaders, and there are negatives to both self- and other-reported data. Self-report data may be biased by factors such as social desirability, whereas data reported by others cannot capture behavior that is not directly observable, and also cannot capture the true intention of the leader. Therefore, in future studies it is desirable to collect data from multiple sources when attempting to assess authentic-transformational leadership.

A major area for future research is to expand the nomological network of authentic-transformational leadership. First, there are a number of antecedents that could be examined. For example, Shamir and Eilam (2005) propose that in order to develop an authentic leadership component, leaders must first have self-knowledge, self-concept clarity, and personal-role merger, which are derived from an understanding of the leader's life-story. Similarly, Gardner et al. (2005) argue that the leader must understand his or her personal history, but must also have certain trigger events that will spark the authentic component of leadership. The nature of the effect that authentic-transformational leaders have on their followers is another area of future research. For example, Gardner et al. (2005) propose that authenticity in the leadership position will result in follower authenticity through the positive modeling of the leader. This could be one of many mediating variables between authentic-transformational leadership and

follower motivations (i.e., affective supervisor commitment, collective identity, trust, positive psychological capital).

Additional research into the moderators between authentic-transformational leadership and follower outcomes would also help to clarify the nature of this relationship. For example, authentic-transformational leadership may be more desirable or effective at different levels within the organization. A mid-level manager, for instance, may have more freedom to be authentic, and may be admired by followers because of this. However, at the CEO level, the leader represents the entire company, and must behave in a manner befitting the position. Considering the level of scrutiny involved, there is less of a chance for a CEO to behave authentically while still meeting the demands of all stakeholders. Any attempts at “breaking the mold” and behaving authentically may not be seen in a favorable light. Therefore, it is possible that authentic-transformational leadership is more effective for mid-level leaders than senior leaders within organizations.

Finally, the nature of the leader-follower relationship may also moderate the effectiveness of authentic-transformational leadership. For example, in a manufacturing setting, leaders and followers have daily, and perhaps hourly interactions, and therefore the leader has ample opportunity to affect follower behavior. In addition, personal stories and similar experiences between leaders and followers may resonate well with the follower, which may ultimately result in positive follower outcomes such as higher performance. Whereas in a more innovative, knowledge-based organization, leader and follower interactions happen less frequently, and may even be seen as a hindrance to the

follower's creativity. It is also less likely that personal stories and the degree of similarity between the leader and follower will result in more positive outcomes. Other moderators such as organizational culture, general economic factors, and even national culture could further explain the nature of the relationship between authentic-transformational leadership and follower and organizational outcomes. Therefore, the effectiveness of authentic-transformational leadership may depend on the given situation, rather than applying universally, as currently theorized.

Conclusion

The concept of authentic leadership, though popular among many researchers, was not found to be distinguishable from transformational leadership in the current study. However, the combination of these two constructs into an authentic-transformational leadership style yielded a number of positive effects for both the employee and the organization. Thus, the authentic leadership concept has served its purpose well and spurred a new line of research for authentic-transformational leadership. The current study is one of only a few to broach the topic of an authentic-transformational leader, and the first to offer an empirical analysis of the construct. Findings from this study indicate that time spent further researching this construct in academia as well as time spent developing these leaders in the business world are both well worth the investment.

References

- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology, 63*, 1-18.
- Antonakis, J., Avolio, B. J., & Sivasubramaniam, N. (2003). Context and leadership: an examination of the nine-factor full-range leadership theory using the Multifactor Leadership Questionnaire. *The Leadership Quarterly, 14*(3), 261-295.
- Arbuckle, J. L. (2008a). *AMOS 17.0 User's Guide*. Crawfordville, FL: Amos Development Corporation.
- Arbuckle, J. L. (2008b). AMOS (Version 17.0) [Computer software]. Crawfordville, FL: Amos Development Corporation.
- Aristotle (1985). *Nicomachean ethics* (T. Irwin, Trans.). Indianapolis, IN: Hackett.
- Avolio, B.J., & Bass, B.M. (1991). *The full range leadership development programs: basic and advanced manuals*. Binghamton, NY: Bass, Avolio & Associates.
- Avolio, B.J., Bass, B.M., & Jung, D.I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology, 72*, 441-462.
- Avolio, B.J., & Gardner, W.L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16*, 315-338.
- Avolio, B.J., Gardner, W.L., Walumbwa, F.O., Luthans, F., & May, D.R. (2004) Unlocking the mask: a look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly, 15*, 801-823.
- Avolio, B., Luthans, F., & Walumbwa, F.O. (2004). Authentic leadership: Theory-building for veritable sustained performance. *Working paper*. Gallup Leadership Institute, University of Nebraska, Lincoln. As cited in Avolio, B.J., Gardner, W.L., Walumbwa, F.O., Luthans, F., & May, D.R. (2004) Unlocking the mask: a look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly, 15*, 801-823.

- Barling, J., Weber, T., & Kelloway, E. K. (1996). Effects of transformational leadership training on attitudinal and financial outcomes: A field experiment. *Journal of Applied Psychology, 81*(6), 827-832.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Bass, B.M. (1985) *Leadership and performance beyond expectations*. New York: Free Press.
- Bass, B. M., & Steidlmeier, P. (1999). Ethics, character, and authentic transformational leadership behavior. *The Leadership Quarterly, 10*(2), 181-217.
- Becker, T. E., & Kernan, M. C. (2003). Matching commitment to supervisors and organizations to in-role and extra-role performance. *Human Performance, 16*(4), 327-348.
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology, 85*(3), 349-360.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238-246.
- Bentler, P. M., & Bonnett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*, 588-606.
- Blake, R. & Mouton, J. (1964). *The managerial grid*. Houston, TX: Gulf.
- Browne, M. W., & Cudeck, R. (1989). Single sample cross-validation indices for covariance structures. *Multivariate Behavioral Research, 24*, 445-455.
- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Carmines, E. G., & McIver, J. P. (1981). Analyzing models with unobserved variables. In: *Social measurement: Current issues*, G. W. Bohrnstedt and E. F. Borgatta, eds. Beverly Hills: Sage Publications.
- Chaoping, L., Hui, M., & Kan, S. (2006). The effects of transformational leadership on organizational citizenship behavior. *Psychological Science, 29*(1), 164-177.
- Chemers, M. M. (2001). Leadership effectiveness: An integrative review. In M. A. Hogg, & R. S. Tindale (Eds.), *Blackwell handbook of social psychology: Group processes* (pp. 376 – 399). Oxford, UK: Blackwell.

- Conger, J. A., Kanungo, R. N., & Menon, S. T. (2000). Charismatic leadership and follower effects. *Journal of Organizational Behavior*, *21*, 747-767.
- Cooper, C.D., Scandura, T.A., & Schriesheim, C.A. (2005). Looking forward but learning from our past: Potential challenges to developing authentic leadership theory and authentic leaders. *The Leadership Quarterly*, *16*, 475-493.
- Cronshaw, S. F., & Lord, R. G. (1987). Effects of categorization, attribution, and encoding processes on leadership perceptions. *Journal of Applied Psychology*, *72*(1), 97-106.
- Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, *87*(4), 611-628.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, *71*, 500-507.
- Endrissat, N., Muller, W. R., & Kaudela-Baum, S. (2007). En route to an empirically-based understanding of authentic leadership. *European Management Journal*, *25*(3), 207-220.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, *4*, 272-299.
- Fiedler, F. E. (1967). *A theory of leader effectiveness*. New York: McGraw-Hill.
- Fleishman, E., Harris, E. F., & Burt, H. E. (1955). *Leadership and supervision in industry*. Columbus: Bureau of Educational Research, Ohio State University.
- Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. O. (2005). Can you see the real me? A self-based model of authentic leader and follower development. *The Leadership Quarterly*, *16*, 343-372.
- Gardner, W. L., & Cleavenger, D. (1998). The impression management strategies associated with transformational leadership at the world-class level. *Management Communication Quarterly*, *12*, 3-42.
- George, B. (2007). *True north: Discover your authentic leadership*. San Francisco, CA: Jossey-Bass.
- Goleman, D. (1995). *Emotional intelligence*. New York, NY: Bantam Books.

- Greenberg, J. (1997). *Occupational crime* (2nd ed.) Chicago: Nelson-Hall.
- Hershcovis, M. S., Turner, N., Barling, J., Arnold, K. A., Dupre, K. E., Inness, M., LeBlanc, M. M., & Sivanathan, N. (2007). Predicting workplace aggression: A meta-analysis. *Journal of Applied Psychology, 92*(1), 228-238.
- Hogan, J., Rybicki, S. L., & Motowidlo, S. J. (1998). Relations between contextual performance, personality, and occupational advancement. *Human Performance, 11*(2), 189-207.
- House, R.J. (1971). A path-goal theory of leader effectiveness. *Administrative Science Quarterly, 16*, 321-339.
- House, R. J., & Aditya, R. N. (1997). The social scientific study of leadership: Quo vadis? *Journal of Management, 23*, 409-473.
- Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader-follower outcomes. *The Leadership Quarterly, 16*, 373-394.
- Jensen, S.M., & Luthans, F. (2006). Entrepreneurs as authentic leaders: Impact on employees' attitudes. *Leadership and Organization Development Journal, 27*(8), 646-666.
- Jex, S.M. (2002). *Organizational psychology: A scientist-practitioner approach*. Wiley and Sons: New York.
- Jones, E. E., & Pittman, T. S. (1982). Toward a theory of strategic self-presentation. In J. Suls (Ed.), *Psychological perspectives on the self* (pp. 231-262). Hillsdale, NJ: Lawrence Erlbaum.
- Joreskog, K. G., & Sorbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language*. Chicago, IL: Scientific Software International.
- Judge, T. A., Piccolo, R. F., & Ilies, R. (2004). The forgotten ones? The validity of consideration and initiating structure in leadership research. *Journal of Applied Psychology, 89*(1), 36-51.
- Keeley, M. (1995). The trouble with transformational leadership: Toward a federalist ethic for organizations. *Business Ethics Quarterly, 5*, 67-95.
- Kenny, D. A., & Zaccaro, S. J. (1983). An estimate of variance due to traits in leadership. *Journal of Applied Psychology, 68*(4), 678-685.

- Kline, R. B. (2004). *Principles and practice of structural equation modeling, 2nd ed.* New York: Guilford.
- Kuhnert, K.W., & Lewis, P. (1987). Transactional and transformational leadership: A constructive/development analysis. *Academy of Management Review, 12(4)*, 648-658.
- Lee, J. (2005). Effects of leadership and leader-member exchange on commitment. *Leadership & Organization Development Journal, 26(8)*, 655-672.
- Likert, R. (1961). *New patterns of management.* New York: McGraw-Hill.
- Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *The Leadership Quarterly, 7(3)*, 385-425.
- Lord, R. G., & Brown, D. J. (2004). *Leadership processes and follower self-identity.* Mahwah, NJ: Lawrence Earlbaum Associates.
- Luthans, F. & Avolio, B. J. (2003). Authentic leadership: A positive development approach. In *Positive Organizational Scholarship.* Eds. Cameron, K. S., Dutton, J. E., & Quinn, R. E. San Francisco, CA: Berrett-Koehler. pp. 241-258.
- Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge.* New York: Oxford University Press.
- Luthans, F., Avolio, B. J., Avey, J., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology, 60*, 541-572.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1(2)*, 130-149.
- May, D. R., Chan, A. Y. L., Hodges, T. D., & Avolio, B. J. (2003). Developing the moral component of authentic leadership. *Organizational Dynamics, 32*, 247-260.
- McKendall, M. (1993). The tyranny of change: Organizational development revisited. *Journal of Business Ethics, 12*, 93-104.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*, 61-89.

- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior, 61*, 20-52.
- Murphy, K. R. (1993). *Honesty in the workplace*. Belmont, CA: Brooks/Cole.
- Nguni, S., Slegers, P., & Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement, 17*(2), 145-177.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome (1st ed.)*. Lexington, Massachusetts/Toronto: D.C. Health and Company.
- Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *Leadership Quarterly, 1*(2), 107-142.
- Price, T. L. (2003). The ethics of authentic transformational leadership. *The Leadership Quarterly, 14*, 67-81.
- Purvanova, R. K., Bono, J. E., & Dzieweczynski, J. (2006). Transformational leadership, job characteristics, and organizational citizenship performance. *Human Performance, 19*(1), 1-22.
- Rai, S., & Sinha, A. (2000). Transformational leadership, organizational commitment, and facilitating climate. *Psychological Studies, 45*(1-2), 33-42.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal, 38*, 555-572.
- Rotundo, M., & Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of Applied Psychology, 87*, 66-80.
- Shamir, B., & Eilam, G. (2005). "What's your story?": A life-stories approach to authentic leadership development. *The Leadership Quarterly, 16*(3), 395-417.
- Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science, 4*(4), 577-594.

- Silvia, P. J., & Duval, T. S. (2001). Objective self-awareness theory: Recent progress and enduring problems. *Personality and Social Psychology Review*, 5, 230-241.
- Snyder, M. (1987). *Public appearance, private realities: The psychology of self-monitoring*. New York, NY: W.H. Freeman & Co.
- Sparrowe, R. T. (2005). Authentic leadership and the narrative self. *The Leadership Quarterly*, 16(3), 419-439.
- Spector, P. E. (1994). Using self report questionnaires in OB research: A comment of the use of a controversial method. *Journal of Organizational Behavior*, 15, 385-392.
- Stevens, C.U., D'Intino, R.S., & Victor, B. (1995). The moral quandary of transformational leadership: Change for whom? *Research in Organizational Change and Development*, 8, 123-143.
- Thurstone, L. L. (1947). *Multiple-factor analysis*. Chicago: University of Chicago Press.
- Van Knippenberg, D., van Knippenberg, B., De Cremer, D., & Hogg, M. A. (2004). Leadership, self, and identity: A review and research agenda. *The Leadership Quarterly*, 15, 825-856.
- Vardi, Y., & Weitz, E. (2004) *Misbehavior in organizations: Theory, research, and management*. Hillsdale, NJ: Erlbaum.
- Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*, 34(1), 89 – 126.
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17, 601-617.
- Wood, G. M. (2008). Authentic leadership: Do we really need another leadership theory? (Doctoral dissertation, George Mason University, 2007). *Dissertation Abstracts International*, 68, 4386.
- Yukl, G. (1998). *Leadership in organizations* (4th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Yukl, G. & Van Fleet, D.D. (1992). Theory and research on leadership in organizations. In M.D. Dunnette & L.M. Hough (Eds.), *Handbook of industrial and*

organizational psychology (2nd ed., Vol. 2, pp. 147-197). Palo Alto, CA:
Consulting Psychologists Press.

Appendices

Appendix A:

Authentic Leadership Scale Pilot Survey



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Dear Respondent,

Thank you for your participation in the current study on leadership. The survey that follows asks questions about a leader with whom you are currently working. Your responses will be used to help clarify the nature of different leadership styles, with the ultimate goal of enhancing the effectiveness of our leaders.

Participation in this study is voluntary and any information you provide will be completely anonymous. Your participation in this project should take approximately 5 - 10 minutes. Thank you kindly for considering this request.

If you have any questions, please feel free to contact me by e-mail, phone, or mail.

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Appendix A: (Continued)

Instructions: Think of a person in a leadership position with whom you are currently working (e.g., your supervisor, manager, director, major professor etc.). This questionnaire is to describe the leadership style of this individual as you perceive it. Please answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.** Please answer this questionnaire anonymously.

How long have you been working with this person? _____ years _____ months

Fifty descriptive statements are listed on the following pages. Judge how frequently each statement fits the person you are describing. Use the following rating scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

THE PERSON I AM RATING. . .

- | | | | | | |
|---|---|---|---|---|---|
| 1. Behaves in an ethical manner..... | 0 | 1 | 2 | 3 | 4 |
| 2. Puts his/her interests in front of others' interests | 0 | 1 | 2 | 3 | 4 |
| 3. Displays a great deal of integrity in daily activities..... | 0 | 1 | 2 | 3 | 4 |
| 4. Blames others or uses them as a scapegoat..... | 0 | 1 | 2 | 3 | 4 |
| 5. Does what is honorable in all situations..... | 0 | 1 | 2 | 3 | 4 |
| 6. Sets high moral standards for himself/herself..... | 0 | 1 | 2 | 3 | 4 |
| 7. Uses others as a stepping stone in order to get ahead..... | 0 | 1 | 2 | 3 | 4 |
| 8. Is an honest person..... | 0 | 1 | 2 | 3 | 4 |
| 9. Displays a positive attitude..... | 0 | 1 | 2 | 3 | 4 |
| 10. Emphasizes the importance of the "bottom line" or making money
above all other concerns..... | 0 | 1 | 2 | 3 | 4 |
| 11. Talks about personal strengths..... | 0 | 1 | 2 | 3 | 4 |
| 12. Does things without a clear focus or goal..... | 0 | 1 | 2 | 3 | 4 |
| 13. Talks about personal weaknesses..... | 0 | 1 | 2 | 3 | 4 |
| 14. Reflects upon his/her thoughts and actions..... | 0 | 1 | 2 | 3 | 4 |
| 15. Loses control of his/her emotions..... | 0 | 1 | 2 | 3 | 4 |
| 16. Is comfortable with who he/she really is..... | 0 | 1 | 2 | 3 | 4 |
| 17. Knows what he/she wants to do..... | 0 | 1 | 2 | 3 | 4 |
| 18. Gets overwhelmed by situations or circumstances..... | 0 | 1 | 2 | 3 | 4 |
| 19. Has a clear direction in life..... | 0 | 1 | 2 | 3 | 4 |
| 20. Behaves inconsistently when dealing with people or situations..... | 0 | 1 | 2 | 3 | 4 |

22. Handles constructive feedback about himself/herself in a mature manner.....	0	1	2	3	4
23. Gives excuses or denies responsibility after performing poorly.....	0	1	2	3	4
24. Is not open to discussing personal weaknesses.....	0	1	2	3	4
25. Actively seeks out or encourages suggestions for personal improvement.....	0	1	2	3	4
26. Makes it difficult to give him/her constructive feedback.....	0	1	2	3	4
27. Admits when he/she is wrong.....	0	1	2	3	4
28. Uses constructive feedback to improve or develop as a leader.....	0	1	2	3	4
29. Exaggerates personal abilities or qualities.....	0	1	2	3	4
30. Discusses personal vulnerabilities.....	0	1	2	3	4
31. Takes the time to get to know my strengths and weaknesses.....	0	1	2	3	4
32. Cares about my personal development.....	0	1	2	3	4
33. Takes the time to get to know my values.....	0	1	2	3	4
34. Seeks to build trust in relationships.....	0	1	2	3	4
35. Keeps to himself/herself, does not communicate openly with me.....	0	1	2	3	4
36. Freely discusses life outside of work.....	0	1	2	3	4
37. Asks about my life outside of work.....	0	1	2	3	4
38. Seems too busy to care about the lives of subordinates.....	0	1	2	3	4
39. Shares sensitive information with me.....	0	1	2	3	4
40. Is open and honest in relationships and interactions.....	0	1	2	3	4
41. Acts according to his/her own moral compass.....	0	1	2	3	4
42. Goes along with how others say he/she should behave.....	0	1	2	3	4
43. Is comfortable with “rocking the boat” or doing things differently.....	0	1	2	3	4
44. Acts according to stated beliefs and convictions.....	0	1	2	3	4
45. Is not himself/herself or acts “fake” as a leader.....	0	1	2	3	4
46. Makes decisions that go against personal values or beliefs in order to please others..	0	1	2	3	4
47. Changes his/her behavior or style in order to fit in.....	0	1	2	3	4
48. Leads from his/her own point of view.....	0	1	2	3	4
49. Wishes to attain status, honors, or other personal benefits through the leadership position.....	0	1	2	3	4
50. Is a unique leader, does not try to copy other leaders.....	0	1	2	3	4

Appendix B:

Transformational Leadership Items (adapted from MLQ-5X; Bass, 1985)

Individualized Consideration:

1. Spends time teaching and coaching
2. Treats me as an individual rather than just a member of a group
3. Considers me as having different needs, abilities, and aspirations from others
4. Helps me to develop my strengths

Idealized Influence – Attributed:

1. Instills pride in me for being associated with him/her
2. Goes beyond self-interest for the good of the group
3. Acts in ways that builds my respect
4. Displays a sense of power and confidence

Idealized Influence – Behavior:

1. Talks about their most important values and beliefs
2. Specifies the importance of having a strong sense of purpose
3. Considers the moral and ethical consequences of decisions
4. Emphasizes the importance of having a collective sense of mission

Inspirational Motivation:

1. Talks optimistically about the future
2. Talks enthusiastically about what needs to be accomplished
3. Articulates a compelling vision of the future
4. Expresses confidence that goals will be achieved

Intellectual Stimulation:

1. Re-examines critical assumptions to question whether they are appropriate
2. Seeks differing perspectives when solving problems
3. Gets me to look at problems from many different angles
4. Suggests new ways of looking at how to complete assignments

Appendix C:

Transactional Leadership Items (adapted from MLQ-5X; Bass, 1985)

Contingent Reward:

1. Provides me with assistance in exchange for my efforts
2. Discusses in specific terms who is responsible for achieving performance targets
3. Makes clear what one can expect to receive when performance goals are achieved
4. Expresses satisfaction when I meet expectations

Management by Exception – Active:

1. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards
2. Concentrates his/her full attention on dealing with mistakes, complaints, and failures
3. Keeps track of all mistakes
4. Directs my attention toward failures to meet standards

Management by Exception – Passive:

1. Fails to interfere until problems become serious
2. Waits for things to go wrong before taking action
3. Shows that he/she is a firm believer in “If it ain’t broke, don’t fix it.”
4. Demonstrates that problems must become chronic before taking action

Appendix D:

General Leader Impression Items (Cronshaw & Lord, 1987)

1. My supervisor exhibits leadership
2. I am willing to choose my supervisor as a formal leader
3. My supervisor is a typical leader
4. My supervisor engages in leader behavior to a good extent
5. My supervisor fits my image of a leader

Appendix E:

Affective Supervisor Commitment Items (adapted from Allen & Meyer, 1990)

1. I would be very happy to spend the rest of my career with this supervisor
2. I enjoy discussing my supervisor with people outside of my organization
3. I really feel as if my supervisor's problems are my own
4. I think I could easily become as attached to another supervisor as I am this one (R)
5. I do not feel like 'part of the family' with my supervisor (R)
6. I do not feel 'emotionally attached' to my supervisor (R)
7. My supervisor has a great deal of meaning to me
8. I do not feel a strong sense of belonging with my supervisor (R)

Appendix F:

Collective Identity Items (adapted from Conger et al., 2000)

1. I see myself and my supervisor as a cohesive team
2. Between my supervisor and I, our conflict is out in the open and is constructively handled
3. My supervisor and I share the same values about our task and purpose
4. My supervisor and I are remarkably similar in our values about what has to be done
5. My supervisor and I have widely shared consensus about our goals and the approaches needed to achieve them

Appendix G:

PsyCap Questionnaire Items (PCQ; Luthans, Youssef, and Avolio, 2007)

1. I feel confident analyzing a long-term problem to find a solution
2. I feel confident in representing my work area in meetings with management
3. I feel confident contributing to discussions about the company's strategy
4. I feel confident helping to set targets/goals in my work area
5. I feel confident contacting people outside the company (e.g., suppliers, customers) to discuss problems
6. I feel confident presenting information to a group of colleagues
7. If I should find myself in a jam at work, I could think of many ways to get out of it
8. At the present time, I am energetically pursuing my work goals
9. There are lots of ways around any problem
10. Right now I see myself as being pretty successful at work
11. I can think of many ways to reach my current work goals
12. At this time, I am meeting the work goals that I have set for myself
13. When I have a setback at work, I have trouble recovering from it, moving on (R)
14. I usually manage difficulties one way or another at work
15. I can be "on my own," so to speak, at work if I have to
16. I usually take stressful things at work in stride
17. I can get through difficult times at work because I've experienced difficulty before
18. I feel I can handle many things at a time at this job
19. When things are uncertain for me at work, I usually expect the best
20. If something can go wrong for me work-wise, it will (R)
21. I always look on the bright side of things regarding my job
22. I'm optimistic about the what will happen to me in the future as it pertains to work
23. In this job, things never work out the way I want them to (R)
24. I approach this job as if "every cloud has a silver lining"

Appendix H:

Employee Task Performance Items (Becker & Kernan, 2003)

1. Adequately completes assigned duties
2. Meets formal performance requirements of the job
3. Neglects aspects of the job he or she is obligated to perform (R)
4. Fulfills responsibilities specified in the job description
5. Engages in activities that can positively affect his or her performance evaluation
6. Performs tasks that are expected of him or her
7. Consistently performs work tasks in a high quality manner

Appendix I:

Organizational Citizenship Behavior Items (Podsakoff et al., 1990)

Conscientiousness:

1. Attendance at work is above the norm
2. Does not take extra breaks
3. Obeys company rules and regulations even when no one is watching
4. Is one of my most conscientious employees
5. Believes in giving an honest day's work for an honest day's pay

Sportsmanship:

6. Consumes a lot of time complaining about trivial matters (R)
7. Always focuses on what's wrong, rather than the positive side (R)
8. Tends to make "mountains out of molehills" (R)
9. Always finds fault with what the organization is doing (R)
10. Is the classic "squeaky wheel" that always needs greasing (R)

Civic Virtue:

11. Attends meetings that are not mandatory, but are considered important
12. Attends functions that are not required, but help the company image
13. Keeps abreast of changes in the organization
14. Reads and keeps up with organizational announcements, memos, and so on

Courtesy:

15. Takes steps to try to prevent problems with other workers
16. Is mindful of how his/her behavior affects other people's jobs
17. Does not abuse the rights of others
18. Tries to avoid creating problems for coworkers
19. Considers the impact of his/her actions on coworkers

Altruism:

20. Helps others who have been absent
21. Helps others who have heavy workloads
22. Helps orient new people even though it is not required
23. Willingly helps others who have work related problems
24. Is always ready to lend a helping hand to those around him/her

Appendix J:

Workplace Deviance Items (Bennett & Robinson, 2000)

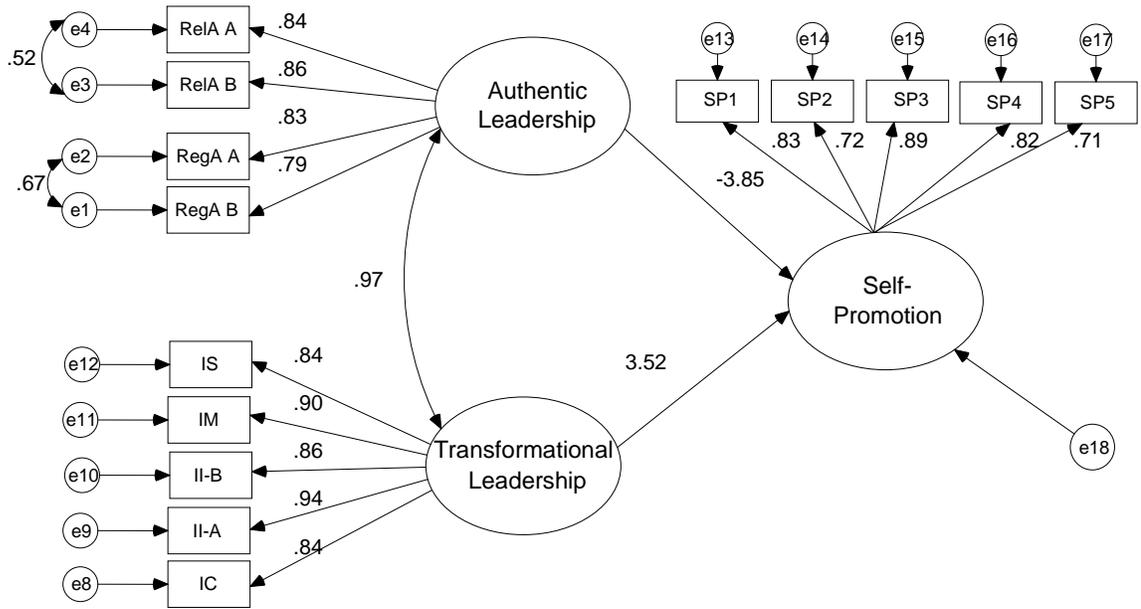
1. Taken property from work without permission
2. Spent too much time fantasizing or daydreaming instead of working
3. Made fun of someone at work
4. Falsified a receipt to get reimbursed for more money than you spent on business expenses
5. Said something hurtful to someone at work
6. Taken an additional or a longer break than is acceptable at your workplace
7. Made an ethnic, religious, or racial remark or joke at work
8. Came in late to work without permission
9. Littered your work environment
10. Cursed at someone at work
11. Neglected to follow your boss's instructions
12. Intentionally worked slower than you could have worked
13. Discussed confidential company information with an unauthorized person
14. Played a mean prank on someone at work
15. Acted rudely toward someone at work
16. Used an illegal drug or consumed alcohol on the job
17. Put little effort into your work
18. Publicly embarrassed someone at work
19. Dragged out work in order to get overtime

Appendix K:

Models and Standardized Estimates for Pilot 2 Impression Management Comparisons

Figure 16-A. Model 1: Self-promotion freely estimated model.

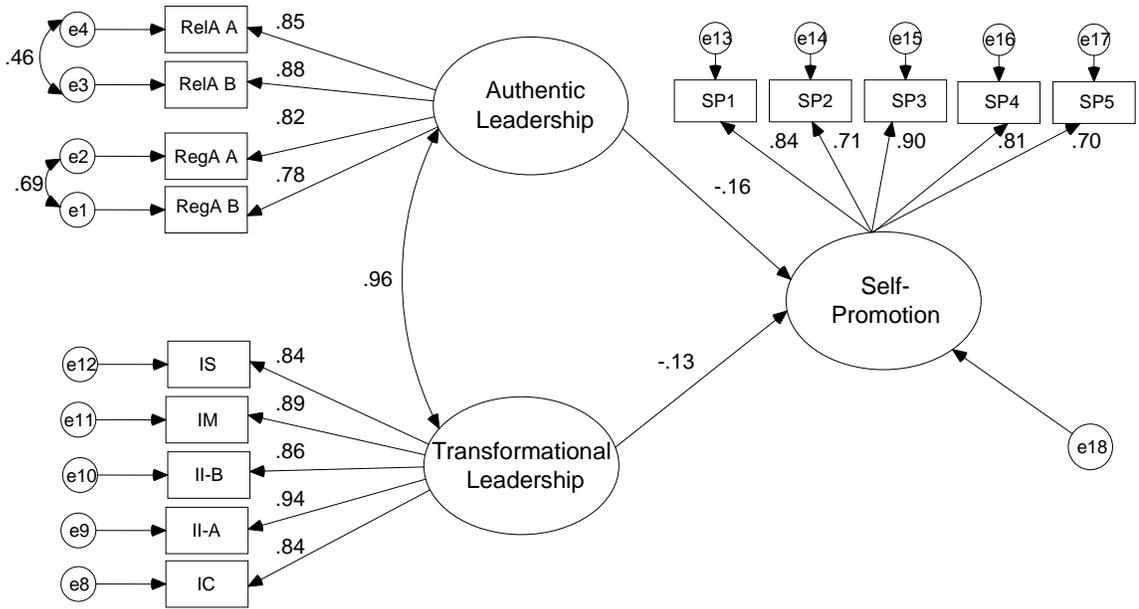
Chi-square = 202.72
 p = .00
 Normed chi-square = 2.82
 CFI = .97
 RMSEA = .08



Appendix K: (Continued)

Figure 16-B. Model 2: Self-promotion equal constraint model.

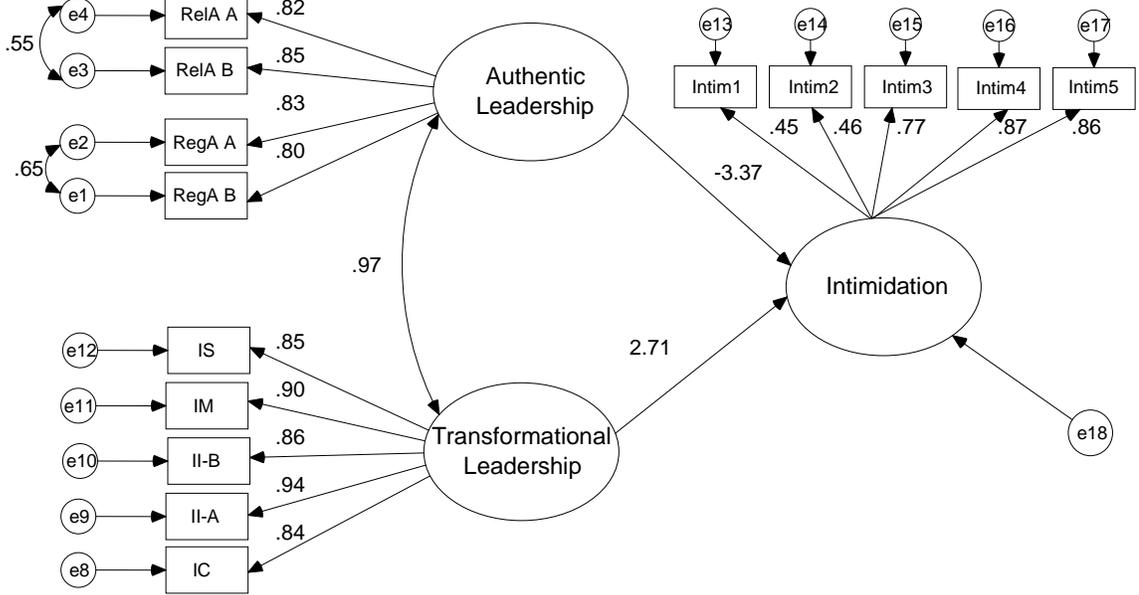
Chi-square = 242.86
 p = .00
 Normed chi-square = 3.33
 CFI = .95
 RMSEA = .09



Appendix K: (Continued)

Figure 16-C. Model 3: Intimidation freely estimated model.

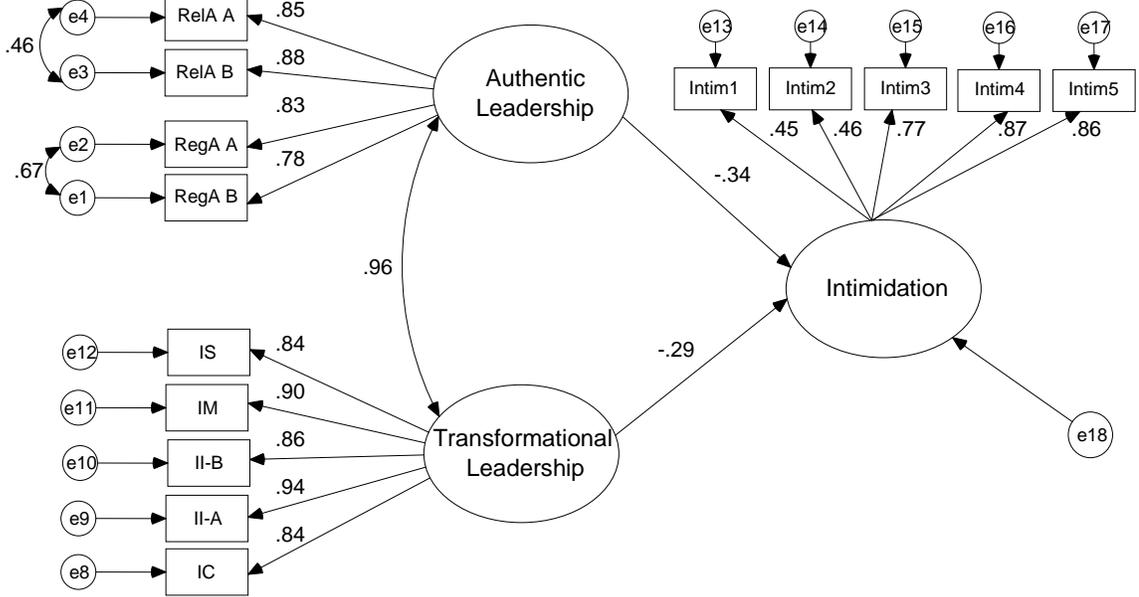
Chi-square = 212.50
 p = .00
 Normed chi-square = 2.95
 CFI = .96
 RMSEA = .08



Appendix K: (Continued)

Figure 16-D. Model 4: Intimidation equal constraint model.

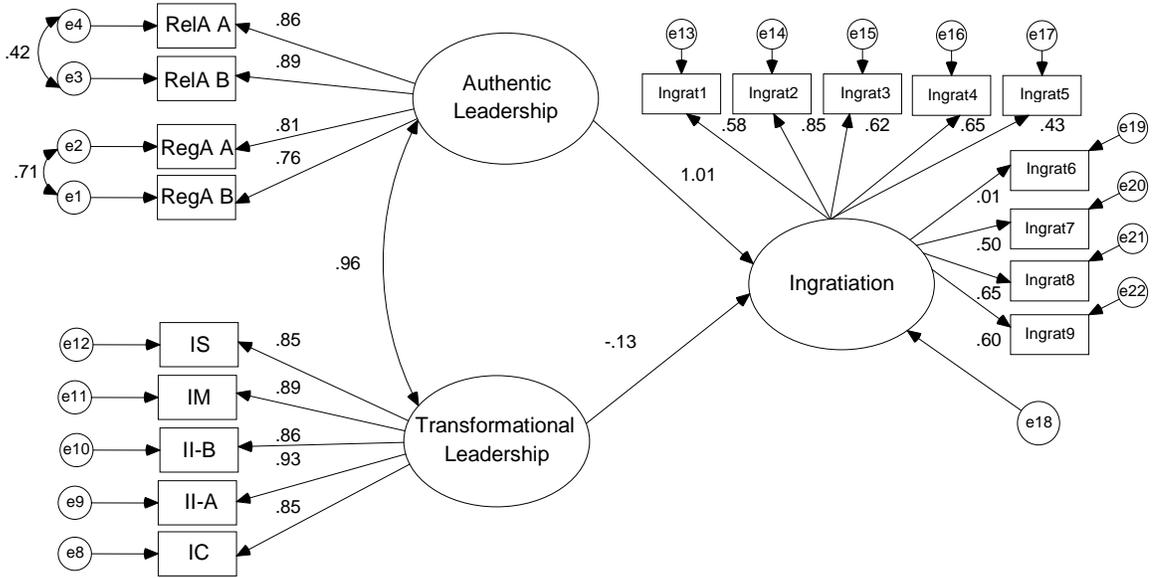
Chi-square = 243.42
 p = .00
 Normed chi-square = 3.33
 CFI = .95
 RMSEA = .09



Appendix K: (Continued)

Figure 16-E. Model 5: Ingratiation freely estimated model.

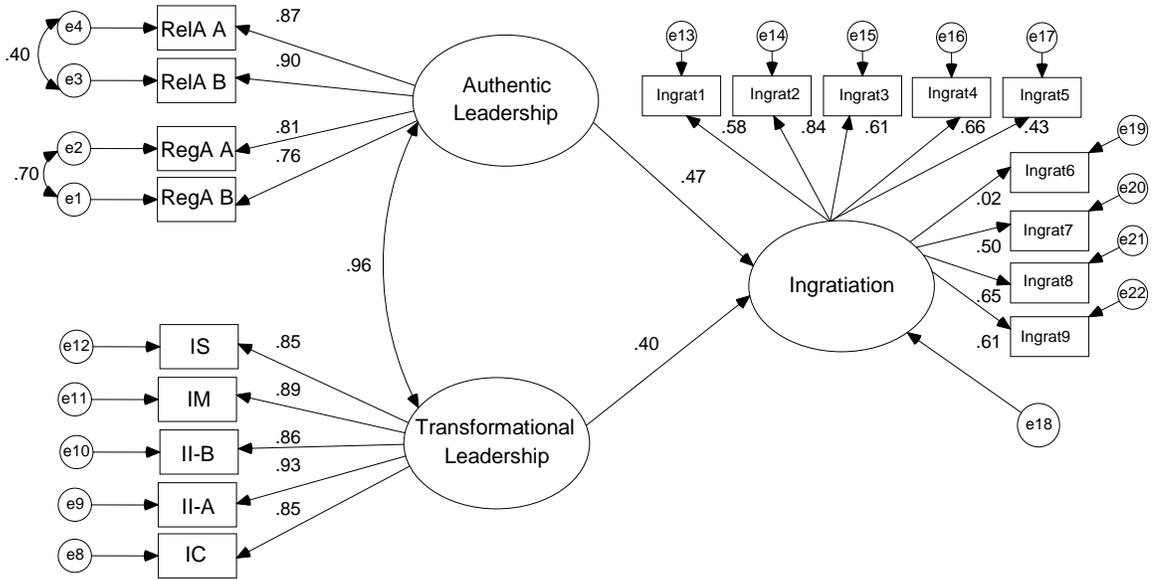
Chi-square = 421.32
 p = .00
 Normed chi-square = 3.30
 CFI = .92
 RMSEA = .09



Appendix K: (Continued)

Figure 16-F. Model 6: Ingratiation equal constraint model.

Chi-square = 431.48
 p = .00
 Normed chi-square = 3.29
 CFI = .92
 RMSEA = .09



About the Author

Matthew Tuttle was born in Toledo, Ohio in September 1979. He graduated from Maumee High School in Maumee, Ohio with the class of 1998, and received a B.A. in Psychology from Bowling Green State University, graduating Magna Cum Laude with the class of 2002. In 2006, he received a M.A. in Industrial/Organizational Psychology from the University of South Florida, and a Ph.D. in 2009. In addition to his graduate studies, he has also had the opportunity to work for research firms and companies in private, non-profit, and public sectors, and serving military, government, and corporate clients. Currently, Matthew lives in Atlanta, GA, where he enjoys watching the Braves and the Dawgs (when the Buckeyes are not playing), being actively involved at church, in the community, and in the great outdoors, and, most of all, spending time with his girlfriend Natalie.