ANTECEDENTS OF EFFECTIVE LEADERSHIP: THE RELATIONSHIPS BETWEEN SOCIAL SKILLS, TRANSFORMATIONAL LEADERSHIP, LEADER EFFECTIVENESS, AND TRUST IN THE LEADER

by

Marisa Adelman Carson

A dissertation submitted to the faculty of
The University of North Carolina at Charlotte
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in
Organizational Science

Charlotte

2011

Approved by:

_____
Dr. Eric D. Heggestad

_____
Dr. Linda R. Shanock

_____
Dr. Bill Gentry

_____
Dr. Wei Zhao

ABSTRACT

MARISA ADELMAN CARSON. Antecedents of effective leadership: the relationships between social skills, transformational leadership, leader effectiveness, and trust in the leader. (Under the direction of DR. ERIC HEGGESTAD and DR. LINDA SHANOCK)

Robust, positive relationships have been evidenced between transformational leadership and several workplace outcomes; however, less is known about the individual differences that predispose some individuals to engage in transformational leadership behaviors. The purpose of the study was twofold: (1) to examine social skill as an antecedent of transformational leadership, and (2) to examine the relationship between social skill and self-awareness of one's transformational leadership ability. Multi-level data were obtained from 124 mid- to upper-level managers (Level 2) and 346 of their direct reports (Level 1) working for a mid-sized utilities company in the Southeastern United States. The results of Part One replicated the positive relationship between transformational leadership and both perceptions of leader effectiveness and trust in the leader. Additionally, three dimensions of social skill were found to be positively related to transformational leadership, but only when same source ratings (focal leader ratings) of both variables were used. The results of Part Two indicated that there were discrepancies between leader- and direct report-ratings of transformational leadership, with leaders tending to over-rate their transformational leadership ability. However, using a polynomial regression and response surface analysis framework, social skill was not significantly related to transformational leadership self-awareness (i.e., discrepancies between focal leader and direct report ratings of transformational leadership). Despite the largely non-significant results obtained in the present study, there is strong theory (e.g.,

Riggio & Reichard, 2008) to support the hypothesized relationships between the six dimensions of social skill and transformational leadership. Based on the strength of the theory combined with limited empirical evidence from the present study, I argue that further investigation into the relationships between social skill and both transformational leadership and transformational leadership self-awareness represents a productive avenue for future research.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to the members of my dissertation committee: Dr. Eric Heggestad, Dr. Linda Shanock, Dr. Wei Zhao, and Dr. Bill Gentry. Together, you have challenged me to think beyond disciplinary boundaries and embrace novel statistical techniques. I would like to thank you for being such wonderful mentors and for supporting me throughout the dissertation process. Your questions, insights, and recommendations have helped to improve this work. In particular, I would like to thank Eric and Linda, my dissertation co-chairs. I have truly been inspired by your intelligence, passion, and energy, and appreciate all you have done to help me achieve success. You have been incredible sources of support throughout my graduate career and I feel fortunate to call you friends.

I would also like to thank Renee Hansen and Erin Jedlikowski, without whom my dissertation data may never have been collected. The access you provided combined with your invaluable organizational knowledge and unwavering support helped to ensure the success of this project. In addition, I would like to thank Scott Mondore and Shane Douthitt. I feel so fortunate to have had your support and guidance throughout the dissertation process, and greatly appreciate your patience and understanding as I attempted to balance school and work.

Finally, I would like to sincerely thank my family and friends for your unwavering love and support throughout my many years of graduate school. I would especially like to thank my parents, who raised me to believe that I could achieve anything I set my mind to and were there to believe in me if ever my own belief should falter. I would also like to give my heartfelt thanks to my husband, A.O. Words cannot

express how much I have appreciated your unconditional love, steadfast support, and patience throughout my graduate career. I thank you for your sense of humor, which helped me to keep it all in perspective, and for your unwavering belief in me.

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CHAPTER 1: STATEMENT OF PURPOSE

Leadership is a central and enduring phenomenon in organizational life. Through selection, training/development, and promotion processes, organizations attempt to advance those individuals who will enhance the performance outcomes of the organization as a whole. Over the past fifty years, a vast body of research has focused on identifying the leadership traits and behaviors that are most likely to enhance organizational efficiency and effectiveness (see Appendix A for a review of the evolution of leadership theories). One perspective that has garnered a great deal of research attention is Bass's (1985) theory of transformational leadership.

Transformational leadership refers to the ways in which leaders affect followers who, in turn, respect, trust, and admire the leader (Bass, 1985). Transformational leaders influence followers by focusing on the value and importance of the task, encouraging followers to replace self-interest with the goals of the team/organization, and engaging the higher-order needs of followers. Transformational leadership is typically defined in terms of four distinct but interrelated types of behavior: inspirational motivation, idealized influence, individual consideration, and intellectual stimulation (Bass, 1985). Through these behaviors, leaders transform and inspire followers and encourage them to consider problems from novel perspectives and develop innovative solutions.

Transformational leadership has been the focus of extensive study, most of which has shown that transformational leadership behaviors are associated with positive

outcomes in terms of subordinate attitudes and performance as well as perceptions of leader effectiveness (Judge & Piccolo, 2004; Podsakoff, MacKenzie, & Bommer, 1996; Yukl, 2006). However, less is known about the antecedents of transformational leadership; rather little is known about why some individuals exhibit transformational leadership behaviors while others do not (Rubin, Munz, & Bommer, 2005).

Transformational leadership is inherently social in that it requires leaders to interact dynamically with followers, modify their behavior according to their environment, and connect with followers in a manner that elicits desired emotional responses (Bass, 1985). To accomplish such social goals, leaders must be able to effectively read, interpret, and act upon the social and emotional cues of their followers (Riggio & Reichard, 2008). Researchers have thus begun to theorize that social and emotional skills are important antecedents of leadership behavior (George, 2000; Riggio & Reichard, 2008). Specifically, social skill, or the ability to send, receive, and decode information in the emotional-non-verbal and social-verbal domains (Riggio, 1986) has been argued to predispose leaders to engage in many of the behaviors associated with transformational leadership (Kupers & Weibler, 2006; Riggio & Reichard, 2008). I thus expect that leaders who are able to understand and manage their own and other's emotions, accurately interpret the social cues of others, and respond appropriately will be more likely to enact the inherently dynamic, social behaviors associated with transformational leadership.

Another line of research has focused on self-awareness as an antecedent of leadership behavior (Atwater & Yammarino, 1992; Tekleab, Sims, Yun, Tesluk, & Cox, 2008). Self-awareness has typically been conceptualized in terms of self-evaluation; self-

aware leaders have self-evaluations that are well-aligned with evaluations of the leader by subordinates, peers, and/or supervisors. Those who over-estimate or underestimate their own performance relative to ratings from other sources lack self-awareness (Tekleab, et al., 2008). Previous research findings suggest that self-awareness is related to higher levels of managerial performance (Church, 1997) and subordinate trust and commitment (Sosik, 2001), and a lower likelihood of derailment (Gentry, Hannum, Ekelund, & de Jong, 2007).

Most prior studies have used alignment on leader performance ratings as an indicator of self-awareness (Atwater & Yammarino, 1997; Church, 1997; Sala, 2003). More recently, researchers (Tekleab, Sims, Yun, Tesluk, & Cox, 2008) have begun to focus on self-other alignment on other types of ratings, including ratings of transformational leadership behavior, in the prediction of leadership outcomes. These researchers have found that leaders whose self-ratings of transformational leadership behavior are in alignment with their subordinates and/or peers ratings of their transformational leadership behavior are perceived as more effective and had more satisfied followers than leaders who either over- or under-estimated their transformational leadership behavior (Tekleab et al., 2008).

These findings suggest that self-awareness of one's performance and/or leadership abilities has positive implications in terms of perceptions of leader effectiveness. However, no studies to date have examined *why* some leaders are more aware of their leadership abilities than others. Given that social skill involves accurately perceiving and interpreting cues in one's social and emotional environment, it seems likely that leaders who are more socially skilled would be more attuned to their

followers' perceptions and thus more self-aware of their leadership abilities than those who lack social skill. Therefore, I expect a positive relationship between the level of a leader's social skill and that leader's degree of transformational leadership self-awareness.

Purposes of the Present Study

Part One: Social Skill, Transformational Leadership, and Leadership Outcomes

Although there is growing interest in the antecedents of transformational leadership, empirical research on this topic remains limited. The primary purpose of the first Part of the present study is to advance our understanding of transformational leadership by examining social skill as an antecedent of transformational leadership. Specifically, I investigate the social-verbal and emotional-non-verbal components of social skill as antecedents of transformational leadership. I predict that individuals who are generally more socially and emotionally skilled will be more likely to engage in transformational leadership behaviors. Transformational leaders, in turn, will be perceived as more trustworthy and effective by their subordinates. The multi-level, hypothesized model for Part One is depicted in Figure 1.

Part Two: Social Skill and Transformational Leadership Self-Awareness

In Part Two, I examine the extent to which social skill is related to self-awareness of one's transformational leadership ability. In this Part of the study, self-awareness is operationalized as agreement between self- and other-ratings of the leaders' transformational leadership ability. Consistent with the extant literature on leadership and self-awareness (Atwater & Yammarino, 1992; Tekleab, Sims, Yun, Tesluk, & Cox; 2008; Yammarino & Atwater, 1997), I expect that socially skilled leaders will be more self-

aware of their transformational leadership ability than those who are lower in social skill. Additionally, I predict that social skill will decrease as self- and other-ratings of transformational leadership become increasingly discrepant.

In the next chapter (Chapter 2), I review in greater depth previous work on transformational leadership and social skill, including theoretical descriptions of each construct and additional empirical studies. I also outline the theoretical rationale for the relationships between social skill and transformational leadership. In Chapter 3, I describe the methodology used to test the proposed hypotheses, including the study design, measures, and analytical techniques. In Chapter 4, I provide the results of the study and conclude in Chapter 5 with a discussion of the study findings, implications, limitations, and directions for future research.

CHAPTER 2: LITERATURE REVIEW

Transactional and Transformational Leadership

Transactional and transformational leadership are two of the primary components of Bass and Avolio's (1994) Full Range Leadership Theory (see Figure 2). Both types of leadership are derived largely from social exchange theory and have been defined primarily in terms of their component behaviors. Although transactional and transformational leadership are distinct, they are not mutually exclusive; to be effective, leaders must use a combination of both types of leadership (Bass, 1990a).

Transactional leadership refers to an exchange between the leader and follower in which the follower receives valued outcomes when he or she acts in accordance with the leader's desires (Yukl, 2006). Transactional leadership is characterized by two behaviors: contingent reward and active management-by-exception (Avolio, Bass, & Jung, 1999). Contingent reward behaviors include clear explanations of the actions required to obtain desired rewards, and the use of incentives and conditional rewards to motivate and influence followers. Active management-by-exception refers to attempts by leaders to actively enforce rules in an effort to avoid mistakes (Avolio, Bass, & Jung, 1999).

In contrast, transformational leadership refers to the ways in which leaders affect followers who, in turn, respect, trust, and admire the leader (Bass, 1985).

Transformational leaders influence followers by: (1) focusing on the value and importance of the task, (2) encouraging followers to replace self-interest with the goals of the team/organization, and (3) engaging higher-order needs of followers. Transformational leaders thus "encourage followers to embrace moral values and to act in the interest of the collective rather than according to self-interest" (Brown & Trevino, 2006, p. 955). By engaging the values of followers, transformational leaders transcend purely exchange-based transactional leadership processes (Bass, 1985).

Transformational leadership is characterized by the following types of behaviors: (1) idealized influence, (2) individualized consideration, (3) intellectual stimulation, and (4) inspirational motivation (Avolio, Bass, & Jung, 1999; Bass & Avolio, 1994). Idealized influence, also referred to as *charisma,* is behavior that evokes strong emotions in followers and causes them to identify with the leader. Individualized consideration refers to focusing attention on followers and providing them with support, encouragement, and coaching. Intellectual stimulation refers to behavior that helps followers to identify problems and think about them from new perspectives. Finally, inspirational motivation refers to the communication of an appealing and inspirational vision and the modeling of desired behaviors by the leader.

Although transformational leadership is defined in terms of the four components discussed above, studies of transformational leadership have generally found the subscales representing these components to be highly intercorrelated (Avolio, Bass, & Jung, 1999). Therefore, consistent with prior studies in which transformational leadership was defined and operationalized as a higher order construct comprised of four distinct but

highly interrelated factors (Bass & Avolio, 1993; Bass, 1998), I present hypotheses at the general transformational leadership (and not the subscale) level.

Part One: Social Skill, Transformational Leadership, and Outcomes of Leadership

Individual-Level Outcomes of Transformational Leadership

Transformational leadership has been the focus of extensive study within the social and industrial/organizational psychology domains, most of which has shown that transformational leadership behaviors are associated with positive individual-level outcomes. For example, transformational leadership has been positively related to general job satisfaction (Podsakoff, MacKenzie, & Bommer, 1996), trust in the leader (Kirkpatrick & Locke, 1996), follower job performance (Howell & Hall-Merenda, 1999), follower commitment to change (Herold, Fedor, Caldwell, & Liu, 2008), and perceptions of leader effectiveness (Seltzer & Bass, 1990), and negatively related to turnover intention (Bycio, Hackett, & Allen, 1995). Of the four types of transformational leadership behavior identified by Bass and Avolio (1994), Podsakoff, MacKenzie, and Bommer (1996) found individualized consideration to be the most important predictor of employee attitudes, role perceptions, and behaviors. Specifically, employees whose leader practiced individualized consideration had greater trust in their leader, overall satisfaction, role clarity, in-role performance, altruism, sportsmanship, and civic virtue (Podsakoff et al., 1996). As compared to transactional leadership behaviors, transformational behaviors appear to be more positively related to subordinate effectiveness and satisfaction (Waldman, Ramirez, House, & Puranam, 2001; See Appendix B for a review of group and firm-level outcomes of transformational leadership).

One of the most robust findings in the transformational leadership literature is the positive relationship between transformational leadership and perceptions of leader effectiveness (Lowe, Kroeck, & Sivasubramaniam, 1996). In addition, transformational leadership has been found to be one of the strongest predictors of trust in ones' leader (Dirks & Ferrin, 2002). Transformational leaders are more likely to be perceived as trustworthy, and subordinates' beliefs that their leader is trustworthy may further enhance their perceptions of leader effectiveness (Bass, 1990a; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Therefore, I focus on effectiveness and trust as key outcomes of transformational leadership. As a replication of previous findings (e.g., Lowe et al., 1996, Dirks & Ferrin, 2002), I expect that leaders who engage in transformational leadership will be perceived as more effective and will be more trusted by their subordinates.

Hypothesis 1. Transformational leadership is positively related to perceptions of leader effectiveness.

Hypothesis 2. Transformational leadership will be positively related to subordinates' trust in the leader.

Antecedents of Transformational Leadership

Although transformational leadership has frequently been associated with positive individual, group, and organizational outcomes, less is known about the knowledge, skills, or abilities that predispose some individuals to engage in transformational leadership behaviors. Empirical efforts to identify the dispositional antecedents of transformational leadership have been abundant in the leadership literature (Bommer, Rubin, & Baldwin, 2004); however, the findings have been mixed and often non-significant. As noted by Bass (1998), "When it comes to predicting transformational

leadership…there is no shortage of personality expectations. However, the empirical support has been spotty" (p. 122). The most commonly examined antecedents include personality factors, attitudes, and cognitions (Bass, 1998). Researchers have found mixed support for personal attributes, such as intelligence, warmth, locus of control, and moral reasoning, as predictors of transformational leadership (Atwater & Yammarino, 1993, Howell & Avolio, 1993; Atwater, Dionne, Camobreco, Avolio, & Lau, 1998). Such mixed empirical findings have likely resulted from the often weak theoretical basis from which antecedents of transformational leadership have been chosen and/or poor alignment between hypothesized antecedents and the behaviors associated with transformational leadership (Bommer et al., 2004).

Transformational leaders must interact dynamically with followers and adjust their behavior so as to best elicit desired *social* responses from others. Moreover, transformational leadership involves evoking desired *emotional* responses in followers; therefore, transformational leaders must accurately understand and effectively manage the emotions of others (Riggio & Reichard, 2008). Social and emotional skills thus appear to be important antecedents of transformational leadership. Researchers have proposed and investigated a variety of distinct but overlapping constructs that fall within the social/emotional skill domain, including social skill (Riggio, 1986), social competence (Schneider, Ackerman, & Kanfer, 1996), emotional intelligence (Mayer & Salovey, 2004), social self-efficacy (Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982), self-monitoring (Snyder, 1974), and political skill (Mintzberg, 1983; see Appendix C for a review of social skill constructs). Of these, emotional

intelligence has most frequently been studied in relation to transformational leadership behaviors.

Emotional intelligence has most commonly been defined as the ability to express, read, and understand emotions and use emotions in mental processing (Mayer & Salovey, 2004). The abilities model offered by Salovey, Mayer, and colleagues (Mayer, Roberts, & Barsade, 2008; Mayer, Salovey, & Caruso, 2004; Mayer & Salovey, 2004) consists of four general emotional abilities: (1) identifying emotions, (2) using emotions to facilitate thinking, (3) understanding emotions, and (4) managing emotions. Emotional intelligence has also been defined in the popular press as a multidimensional trait comprised of innate characteristics that enable and promote well-being (Goleman, Boyatzis, & McKee, 2002). This model often includes a variety of competencies including self-awareness, self-management, social awareness, and relationship management (Goleman et al., 2002), and has been criticized for confounding personality traits, moods, and general intelligence with emotional intelligence (Mayer, Roberts, & Barsade, 2008).

Using a variety of definitions and measures, researchers have investigated the relationship between emotional intelligence and transformational leadership (George, 2000; Sosik & Megerian, 1999). Barbuto and Burbach (2006) found leader emotional intelligence to be positively related to transformational leadership. Similarly Barling, Slater, and Kelloway (2000) found emotional intelligence to be positively related to the inspirational motivation, intellectual stimulation, and individualized consideration aspects of transformational leadership. In a recent meta-analysis, Harms and Crede (2010) found emotional intelligence to be positively related to transformational leadership ($\rho = .54$) when ratings of emotional intelligence and transformational leadership behaviors were

provided by the same source; however, validity estimates were much lower ($\rho = .14$) when ratings of the constructs were derived from different sources. Equally problematic was their finding that multidimensional trait measures of emotional intelligence, which confound personality traits and aspects of general intelligence with emotional intelligence (MacCann & Roberts, 2008), were more positively correlated with transformational leadership than the more distinct ability measures of emotional intelligence.

Although these and other studies suggest that emotional intelligence is indeed related to transformational leadership, the confusing array of definitions of emotional intelligence and the variety of ways in which it has been operationalized have confounded our understanding of the way in which emotional intelligence is related to transformational leadership. Additionally, by focusing exclusively on emotional aspects of leadership, researchers have neglected many important social aspects including the ability to express oneself in social interactions, to interpret various social situations and adjust one's behavior accordingly, and to play various social roles (Riggio & Reichard, 2008). Riggio's (1986) model of social skills, with an emphasis on both the verbal-social and nonverbal-emotional domains, represents a broader range of abilities than those represented by the emotional intelligence construct and thus provides a more complete and parsimonious framework from which to examine relationships with transformational leadership (Riggio & Reichard, 2008).

Social Skill

Social skill emerged from the early work of Thorndike (1920, as cited in Ferris, Perrewe, & Douglas, 2002) and refers to the ability to effectively send and receive social-verbal and emotional-non-verbal information. This process depends on knowledge of

socially appropriate behaviors as well as the ability to flexibly regulate these behaviors in accordance with changing situational demands. Riggio (1986) defined social skill in terms of the following six dimensions: emotional expressivity, emotional sensitivity, emotional control, social expressivity, social sensitivity, and social control. Emotional expressivity refers to the accurate verbal and nonverbal expression of experienced emotional states. People high in emotional expressivity may be described as "emotionally charged" and able to "emotionally arouse or inspire others because of their ability to transmit their felt emotional states" (Riggio, 1986, p. 651). Emotional sensitivity refers to one's ability to accurately receive and decode the nonverbal cues emitted by others. Emotional control involves the ability to regulate ones emotional responses to others. Those individuals high in emotional control guard against the expression of extreme or spontaneous displays of emotion by paying attention to their feelings (i.e. self-monitoring) and adjusting their actions according to the situation.

Social expressivity refers to ones' overall ability to effectively engage in social interaction. "Persons high in SE (social expressivity) appear outgoing and gregarious because of their ability to initiate conversations with others" (Riggio, 1986, p. 651). Social sensitivity focuses on ones' ability to comprehend verbal communication and engage in effective communication within the normative context of the situation. Finally, social control refers to the general ability to effectively present oneself in social situations. Those high in social control are capable of varying their behavior in order to best match the social demands of any given situation (Riggio, 1986).

In an empirical study utilizing the Social Skills Inventory, which operationalizes the six dimensions of social skill discussed above, Riggio (1986) found strong positive

correlations between the social skill dimensions (particularly social expressivity and social control) and the favorability of initial impressions. Similarly, Riggio, Riggio, Salinas, and Cole (2003) found that the possession of basic social skills correlated positively with others' ratings of leader effectiveness. Together, these findings suggest that social skills are an important component of effective leadership.

Social skills are likely to influence the types of behaviors a leader exhibits, thus affecting the way in which the leader is perceived. Leaders who are able to read and interpret social and emotional cues and act upon this understanding are more likely to exhibit behaviors that meet the needs of their followers, ultimately resulting in more positive perceptions of the leader's performance (Riggio & Reichard, 2008). Specifically, for transformational leaders whose influence rests on the ability to effectively employ communicative strategies in order to instill in others a sense of identity and purpose (Yukl, 2006), the abilities to appropriately express and control their emotional and social displays are particularly important. Additionally, transformational leaders must be able to effectively read and decipher the verbal and nonverbal information that they receive from followers in order to respond in a manner that meets followers' needs. Thus, social and emotional sensitivity are also essential if followers are to perceive their leader as transformational.

Social/Emotional Sensitivity and Transformational Leadership

To effectively engage in each of the behaviors associated with transformational leadership, leaders must be sensitive to their followers and capable of reading and understanding dynamic social contexts. Social sensitivity, as described by Riggio (1986), involves effectively reading and interpreting verbal cues whereas emotional sensitivity

involves an understanding of non-verbal cues (e.g., body language, facial reactions). Together, social and emotional sensitivity should help leaders to better recognize and understand the thoughts, feelings, and needs of followers, establish rapport, and engage in active listening and monitoring of social behaviors (Riggio & Reichard, 2008).

Idealized influence and inspirational motivation (which tend to be highly correlated in studies using the MLQ; Bass, 1985) refer, in part, to engaging the morals and values of followers and encouraging followers to identify with the shared vision articulated by the leader. Leaders who are perceived as inspirational and who exhibit idealized influence often offer innovative ideas that deviate from the status quo (Bass, 1985). To be well-received, such ideas must be offered at a time when followers are most receptive and the environment is most favorable (Conger & Kanungo, 1987). Thus, sensitivity to both the expressed and unexpressed needs and motives of followers is critical if leaders are to exhibit idealized influence and inspirational motivation.

Similarly, intellectual stimulation involves encouraging followers to question assumptions, reframe old problems, and offer innovative solutions (Bass, 1985). To intellectually stimulate followers, the leader must be sensitive to followers' skills, abilities, and interests, and have a strong understanding of the extent to which followers can be challenged. Finally, individualized consideration involves understanding the unique needs and motives of one's followers and tailoring one's style to best satisfy those needs/motives. Socially and emotionally sensitive leaders will possess the understanding and insight necessary to appropriately adjust their style and behavior to best meet the unique needs of each of their followers.

Hypothesis 3. Social sensitivity is positively related to transformational leadership.

Hypothesis 4. Emotional sensitivity is positively related to transformational leadership.

Social/Emotional Expressivity and Transformational Leadership

As noted previously, emotional expressiveness refers to the ability to convey emotional messages whereas social expressiveness involves skill in engaging others in social interactions (Riggio, 1986). Both of these skills are critical for transformational leaders, whose influence rests largely on their ability to inspire followers through engaging social exchanges and emotional appeals (Bass, 1985; Yukl, 2006). Leaders who exhibit emotional expressiveness are likely to motivate and inspire followers by conveying positive affect while those who are socially expressive will excel at public speaking and persuasion as well as one-on-one coaching (Riggio & Reichard, 2008). Emotional and social expressiveness are particularly important for the inspirational motivation and idealized influence components of transformational leadership, which involve rousing the emotions of followers and inspiring them to transcend self-interest in the pursuit of shared goals (Bass, 1985). Indeed, prior research suggests that emotional expressiveness is closely associated with perceptions of charismatic leadership/idealized influence (Cherulnik, Donley, Wiewel, & Miller, 2001). Similarly, skill in expressing oneself in a clear and compelling manner has been found to be critical for leaders as they ascend the organizational hierarchy and take on roles that increasingly require them to motivate and persuade their followers (Riggio et al., 2003). Thus, social and emotional

expressiveness are critical if leaders are to exhibit idealized influence and inspirational motivation.

In addition to inspiring the masses through broadly-directed social and emotional appeals, leaders must be able to adapt their expressions to best meet the needs of their followers in one-on-one interactions. Leaders high in social and emotional expressiveness possess a large repertoire of expressive behaviors and are able to adjust their behaviors depending on situational demands (Riggio, 1986; Riggio & Reichard, 2008). Such flexibility is essential if leaders are to exhibit individualized consideration, as some followers may be motivated by gregarious appeals whereas others may require more subtle and subdued forms of expressive influence. Thus, leaders who are able to modify their social/verbal and emotional/non-verbal expressions per the needs of their followers will be more likely to engage in the behaviors associated with individualized consideration.

Finally, social and emotional expressiveness are critical antecedents of intellectual stimulation, which involves encouraging followers to reframe past problems and generate novel solutions (Bass, 1985). Through contagious emotional expressions, leaders may arouse in followers feelings of displeasure or frustration with existing practices or procedures. By expressing such displeasure verbally, leaders may reinforce the need for change and create an environment in which novel ideas are willingly expressed and actively considered. The ability to express one-self through both emotional and social channels is thus important if leaders are to be perceived as intellectually stimulating.

Hypothesis 5. Social expressivity is positively related to transformational leadership.

Hypothesis 6. Emotional expressivity is positively related to transformational leadership.

Social/Emotional Control and Transformational Leadership

To be perceived as transformational, leaders must also be able to control their social and emotional expressions. Emotional control refers to regulating one's nonverbal/emotional displays and masking emotions when appropriate (Riggio, 1986). Similarly, social control refers to regulating one's social self-presentation and engaging in social role-playing (Riggio, 1986). By regulating inappropriate emotional and social displays and adjusting such displays to best meet situational demands, leaders are able to manage the impression they make on others and exude a sense of calm and control in the face of challenges (Riggio & Reichard, 2008).

Skill in controlling one's social and emotional displays is an important component of both idealized influence and inspirational motivation. Leaders must effectively regulate their own emotions and social expressions so as to evoke desired responses from followers. For instance, leaders may need to suppress their own disappointment or anger in the interest of encouraging and motivating followers. Alternatively, leaders may need to express their negative feelings in a controlled manner so as to ignite their followers' passion and instill a sense of urgency in goal pursuit.

Understanding when to suppress versus express felt emotions and social expressions is also an important aspect of individualized consideration. Some followers may become disheartened by their leaders' negative or angry emotional displays whereas such displays will inspire and motivate others. The ability to control one's social and

emotional displays and tailor them to meet the unique needs of one's followers is thus a critical antecedent of individualized consideration.

Finally, by regulating their emotional and social expressions, leaders should be better able to intellectually stimulate their followers. To be perceived as intellectually stimulating, leaders must appropriately challenge their followers to reframe existing problems and develop innovative solutions (Bass, 1985). The development of fresh, "outside the box" ideas requires an element of risk-taking and a willingness to fail. If leaders react to failures with angry outbursts or disappointment, followers may be deterred from pursuing innovative ideas in the future. Therefore, it is critical that leaders regulate their emotional and social displays so as to support followers through challenges and encourage ongoing innovative efforts.

Hypothesis 7. Social control is positively related to transformational leadership.

Hypothesis 8. Emotional control is positively related to transformational leadership.

Social Skill, Transformational Leadership, and Leadership Outcomes

Social skills are expected to relate to leader effectiveness and trust in the leader through their effect on the leader's transformational behaviors. Specifically, I expect social expressivity, emotional expressivity, social sensitivity, emotional sensitivity, social control, and emotional control to be positively related to transformational leadership. In turn, I expect transformational leadership to be positively related to perceptions of leader effectiveness and trust in the leader. I thus offer the following hypotheses:

Hypothesis 9a. Transformational leadership will mediate the relationship between social expressivity and perceptions of leader effectiveness.

Hypothesis 9b. Transformational leadership will mediate the relationship between emotional expressivity and perceptions of leader effectiveness.

Hypothesis 9c. Transformational leadership will mediate the relationship between social sensitivity and perceptions of leader effectiveness.

Hypothesis 9d. Transformational leadership will mediate the relationship between emotional sensitivity and perceptions of leader effectiveness.

Hypothesis 9e. Transformational leadership will mediate the relationship between social control and perceptions of leader effectiveness.

Hypothesis 9f. Transformational leadership will mediate the relationship between emotional control and perceptions of leader effectiveness.

Hypothesis 10a. Transformational leadership will mediate the relationship between social expressivity and direct report's trust in the leader.

Hypothesis 10b. Transformational leadership will mediate the relationship between emotional expressivity and direct report's trust in the leader.

Hypothesis 10c. Transformational leadership will mediate the relationship between social sensitivity and direct report's trust in the leader.

Hypothesis 10d. Transformational leadership will mediate the relationship between emotional sensitivity and direct report's trust in the leader.

Hypothesis 10e. Transformational leadership will mediate the relationship between social control and direct report's trust in the leader.

Hypothesis 10f. Transformational leadership will mediate the relationship between emotional control and direct report's trust in the leader.

Part Two: Social Skill and Transformational Leadership Self-Awareness

Self-Awareness

Traditionally defined as an individual difference variable, self-awareness involves one's ability to self-observe and make accurate self-evaluations (Wegner & Vallacher, 1980). According to the theory advocated by Wicklund (1975, 1979), self-awareness involves four discrete stages: self-focused attention, self-evaluation, affective reaction, and motivated discrepancy reduction. Self-focused attention leads individuals to evaluate themselves in terms of an ideal self-image. If/when a discrepancy is recognized between one's actual (real) self and one's ideal self, the individual experiences either a positive or negative affective response, depending on the direction of the discrepancy (Wicklund, 1975). When the real-ideal discrepancy produces a negative affective response, individuals will work to alleviate this response by either reducing the size of the discrepancy or avoiding self-focused attention entirely.

The more self-aware an individual, the more capable he or she is of incorporating self-comparison information into his or her evaluation of self and ultimately into his or her behavior (Atwater & Yammarino, 1992). Self-aware individuals are cognizant of how they are perceived by others and are able to incorporate this information into their self-evaluation (Atwater & Yammarino, 1992). The incorporation of others' perceptions into one's self-evaluation ultimately results in a more accurate self-assessment.

Self-awareness has frequently been operationalized as agreement between self- and other-ratings of performance (Atwater & Yammarino, 1992; Tekleab et al., 2008). Consistent with Wicklund's (1975) theory of self-awareness, self-aware individuals should hold self-perceptions of their performance that are aligned with those provided by

direct reports, peers, and supervisors. Research has suggested that the degree of agreement between self and other-ratings is relevant to the future behavior of the self-rater (Atwater & Yammarino, 1992). Individuals whose self-ratings are in agreement with other-ratings are likely to have incorporated information from others into their self-assessment and adjusted their behavior accordingly. Those who have a very positive self-evaluation that exceeds evaluations offered by others (i.e., over-raters) are unlikely to perceive any need for behavioral change (Atwater & Yammarino, 1992; Yammarino & Atwater, 1997). Finally, individuals with overly negative self-evaluations (i.e., under-raters), are likely to feel some pressure to alter their behavior but may lack the confidence or self-efficacy necessary to do so (Atwater & Yammarino, 1992).

Self-awareness has been argued to be an important antecedent of many workplace outcomes. Atwater and Yammarino (1992) suggested that individuals whose self- and other-ratings are in-agreement are more likely than their over- or under-estimating peers to experience positive outcomes. Individuals whose self- and other-ratings are in-agreement recognize how they are perceived by others and are capable of adjusting their behavior to form desired impressions. When ratings are in-agreement at high levels of performance (in-agreement/good), outcomes are expected to be more positive than when ratings are in-agreement at low levels of performance (in-agreement/poor; Yammarino & Atwater, 1997). Under-raters are expected to have slightly lower performance outcomes than those who are in-agreement, as they tend to lack the confidence necessary for long-term success (Yammarino & Atwater, 1997). Finally, over-estimators are expected to have the lowest performance outcomes because they have inflated self-perceptions and

do not recognize that these perceptions are incongruent with those held by their peers, colleagues, and supervisors (Atwater, et al., 2005; Yammarino & Atwater, 1997).

As noted by Atwater, Ostroff, Yammarino, and Fleenor (1998), "self-other agreement is most relevant to outcomes that involve human perceptions and less relevant to more objective measures such as sales volume or meeting productivity goals" (p. 595). Indeed, self-awareness has been positively associated with a variety of perceptual outcomes, including follower satisfaction, follower self-leadership (Tekleab et al., 2008), follower commitment, trust in the leader (Sosik, 2001), and leadership effectiveness (Atwater, Waldman, Ostroff, Robie, & Johnson, 2005; Atwater & Yammarino, 1992; Tekleab et al., 2008). Self-aware managers have been found to be more effective than those who either over- or under-estimate their performance (Church, 1997). Atwater and Yammarino (1992) found over-estimators to be less effective leaders than either under-estimators or those whose self- and other-ratings were in-agreement. Based on their findings, Atwater and Yammarino (1992) concluded that leader self-awareness should be considered in trying to predict leader behavior and performance.

Most studies to date have used alignment on *performance* ratings as an indicator of self-awareness in the prediction of leader effectiveness (Atwater & Yammarino, 1992; Church, 1997). More recently, researchers have begun to focus on self-other agreement on other types of perceptual ratings, including ratings of derailment potential (Gentry et al., 2007) and transformational leadership behavior (Atwater et al., 1998; Tekleab et al., 2008). Tekleab and colleagues (2008) found that leaders whose self-ratings of transformational leadership behavior were in alignment with their subordinates and/or peers ratings of their transformational leadership behavior were more effective and had

more satisfied followers than leaders who either over- or under-estimated their transformational leadership behavior. Using alignment on ratings of transformational leadership behavior, Atwater, et al. (1998) reported that leader effectiveness was greater for in-agreement/good leaders than for in-agreement/poor transformational leaders. In addition, Sosik and Megerian (1999) found that the relationship between emotional intelligence and transformational leadership depends on leader self-awareness such that more self-aware leaders exhibited a stronger relationship between emotional intelligence and transformational leadership than over- or under-estimators.

The relationship between self-awareness of leadership behaviors and leader effectiveness has proven to be quite robust. Indeed, self-awareness of leadership behaviors should be a somewhat stronger predictor of effectiveness than either self- or other-ratings examined independently because leadership performance is inherently dependent upon interactions with others (Atwater & Yammarino, 1992). However, we know relatively little about why some leaders are more self-aware of their leadership abilities than others. Given that social skill involves accurately perceiving and interpreting cues in one's social and emotional environment, it seems likely that leaders who are more socially skilled will be more attuned to their followers' perceptions and, as a result, more self-aware of their leadership abilities. Social skill will thus be positively related to transformational leadership among leaders whose self- and other-ratings are in agreement. In contrast, leaders who lack self-awareness (i.e., over- or under-estimate their transformational leadership behavior relative to their direct reports) will likely have lower levels of social skill than those whose self- and other-ratings are in-agreement. Therefore, I offer the following hypotheses:

Hypothesis 11a: When focal leader and direct report ratings of transformational leadership are in-agreement, social skill will be positively related to transformational leadership.

Hypothesis 11b: When focal leader ratings of transformational leadership are greater than direct report ratings of transformational leadership (i.e., over-raters) or vice versa (i.e., under-raters), social skill will be lower than when focal leader and direct report ratings of transformational leadership are in-agreement.[1]

[1] Consistent with prior self-awareness studies (e.g., Atwater et al., 2005), Hypotheses 11a and 11b are stated in terms of the level of agreement between self and other ratings. Individuals whose self-ratings are within one half standard deviation of other-ratings are considered "in-agreement". Individuals are identified as "over-raters" when their self-ratings exceed other-ratings by one half standard deviation or more. In contrast, "under-raters" have self-ratings that are more than one half standard deviation below other-ratings.

CHAPTER 3: METHOD

Sample and Procedure

Data for the present study were obtained through a survey of mid- to upper-level managers and their direct reports at a mid-sized utility company in the Southeastern United States. The utility industry is relatively stable and has been affected to a lesser extent by the recent economic downturn than many other industries (e.g., banking and finance). The study organization itself is very traditional and hierarchical in nature, with most managers interacting on a regular basis with their direct reports. Many of the study organization's front line employees are members of the union. For confidentiality purposes, questions about union membership were not included on the survey; however, it is likely that many of the direct reports who participated in this study – particularly those in the Operations department – were members of the union.

In recent years, the organization has experienced a change in senior leadership. The new senior leadership team has worked to build a more participative culture characterized by cross-functional collaboration and shared decision-making. Employee opinion surveys were implemented during this cultural transition to assess changes in employees' attitudes. The uncertain circumstances under which the surveys were implemented caused them to be received by employees with some skepticism. Such skepticism regarding organizational surveys persists to this day. Therefore, in developing

the procedure for the present study and refining the survey measures, I was cognizant of the unique context in which employees were situated and their general hesitation to respond honestly (if at all) to surveys.

In an effort to alleviate employees' concerns, the survey for the present study was delivered using a web-based system (Survey Monkey) that was distinct from the study organization's internal survey system. Electronic surveys were used to collect all study data; paper-and-pencil surveys *were not* provided. Managers and direct reports were invited via email to complete a short online survey (see Appendices D and E for recruitment materials). Those choosing to participate followed a link from the email to the online survey.

Survey participation was entirely voluntary; any individual who preferred not to participate in the survey had the option to decline participation by deleting the invitation email. No inducements were provided by either the study organization or the primary researchers for study participation. Instructions for completing the survey were provided on the opening page of the online survey and could be accessed by participants at any time during their completion of the survey. Completion of the entire survey required approximately 15 to 20 minutes for focal leaders and seven to 10 minutes for direct reports. Upon conclusion of the survey, managers and direct reports were re-directed to the Survey Monkey homepage.

In total, 237 supervisors/managers and 1,777 of their direct reports were invited to participate in the survey (see Appendices D and E for recruitment materials). Completed surveys were received from 141 managers (59.5 percent response rate) and 556 direct reports (31.3 percent response rate). To be included in the present study, participants had

to satisfy two inclusion criteria: (1) the supervisor/manager him or herself had to complete a battery of measures assessing his/her leadership behaviors and social skills, and (2) one or more of the supervisor/manager's direct reports had to have completed measures describing their supervisor's/manager's leadership behaviors and effectiveness. Although 141 supervisors/managers participated, only 124 (52 percent of the potential participant pool) met the above inclusion criteria with a corresponding 346 direct reports providing responses. On average, 2.85 responses were received per manager (minimum = 1; maximum = 7).

Sampled managers were evenly distributed across organizational levels, with 49 percent holding front-line supervisory positions (e.g., operations supervisor) and 49 percent holding mid- to upper-management positions (e.g., manager, director, vice president). Seventy-two percent of the managers were male, and most (55.6 percent) have worked for the study organization for more than 16 years. The majority of managers (43.8 percent) worked in the Operations - Distribution and Service Department, followed by 14.3 percent in Customer Service. Finally, most managers (37.9 percent) supervised between six and 10 employees.

The 346 direct reports included in this study worked across departments, with the majority (45.8 percent) in Operations – Distribution and Service followed by 18.9 percent in Customer Service. Most (41.6 percent) indicated that they had worked for the study organization for more than 16 years, and the majority of respondents (29.5 percent) have reported to their current manager/supervisor for less than one year.

Measures

Given the various sources of data used in this study, it is necessary to clarify the terms used to denote each source. The term "focal leader" is used to describe the supervisors/managers whose social skill and transformational leadership are the focus of this study. The term "direct report" denotes the group of employees who report directly to the focal leader. A complete list of study measures by respondent category (focal leader versus direct report) can be found in Table 1.

Social skill. The focal manager's social skill was measured using a subset of items from Riggio's (1986) Social Skill Inventory (SSI). The SSI is a self-report instrument designed to assess basic social skills (Riggio, 1986). The original multidimensional instrument consists of 90-items organized into the following 15-item subscales: social expressivity, social sensitivity, social control, emotional expressivity, emotional sensitivity, and emotional control (Riggio, 1986). In prior research reported by Riggio (1986), internal reliability estimates for the SSI scales were found to range from .75 (emotional expressivity) to .88 (social expressivity). In addition, test-retest reliabilities over a two week timeframe ranged from .81 (emotional expressivity) to .96 (social expressivity). Internal consistency of the total 90-item SSI has been found to be quite high ($\alpha = .97$; Riggio et al., 2003). Previous exploratory factor analyses generally support the multidimensional nature of the SSI, with five of the six subscales emerging as distinct factors and the emotional expressivity subscale cross-loading on the emotional control (-.27 to -.31) and social expressivity factors (.11 to .16; Riggio, 1986).

Moderate correlations have been found between the SSI and traditional measures of personality, including the 16 Personality Factor Test (16 PF; Cattell, Eber, & Tatsuoka, 1970), the Private and Public Self-Consciousness Scales (Buss, 1980), and the

Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964). For example, emotional expressivity was positively correlated with the outgoing, assertive, and venturesome scales of the 16 PF; emotional sensitivity was positively correlated with the apprehensive, tense, and tender-minded scales of the 16 PF; emotional control was positively correlated with the emotional stability, self-assured, and controlled scales of the 16 PF; social expressivity was positively correlated with the 16 PF gregariousness scale; social sensitivity was positively correlated with the shyness, apprehensiveness, and conservative dimensions of the 16 PF; and social control was positively correlated with the emotional stability and self-assured scales of the 16 PF (Riggio, 1986). Together, these results provide evidence of the convergent validity of the SSI (Riggio, 1986). Additionally, strong positive correlations have been found between the dimensions of social skill and the favorability of initial impressions, social group memberships, the depth of social networks, and ratings of leader effectiveness (Riggio, 1986; Riggio, et al., 2003). Together, these findings provide evidence of the construct validity of the SSI.

Due to survey length limitations imposed by the organization from which data were collected, a shortened version of the SSI was developed for the purposes of the present study. To shorten the inventory, an exploratory principal axis factor analysis with oblique Promax rotation was conducted on the SSI scales using data that were collected previously during a lab study of undergraduate students. Given prior evidence of the factor structure of the SSI (e.g., Riggio, 1986) and my intent to shorten the instrument while maintaining each of the individual scales, I constrained the analysis to six factors. Based on initial item analyses, items with weak loadings (i.e., loadings less than |.30|) on their intended factor and/or high cross-loadings (i.e., loadings greater than |.40| on more

than one factor) were removed. The same data were then re-analyzed using the factor analysis procedure described above.

In addition, the 90 original SSI items were conceptually sorted by a group of expert raters. I provided Riggio's (1986) definition of each social skill dimension (e.g., Emotional Expressivity, Emotional Sensitivity, Emotional Control, Social Expressivity, Social Sensitivity, and Social Control) to a group of advanced graduate students and faculty members who are involved in similar organization studies research. Using the definitions provided, the expert raters were asked to sort each item into the social skill dimension that it most closely reflected (with the option of selecting "none of the above" for items they determined didn't fit into any of the social skill dimensions). Three raters completed this task. Items on which two-thirds of the raters agreed were retained for further analysis.

The results of the conceptual sorting task were compared to the results of the exploratory factor analysis to develop the shortened version of the SSI. Items with strong factor loadings and low cross-loadings in the revised principal axis factor analysis as well as strong conceptual agreement were retained for use in the present study. The shortened inventory was comprised of 40 items organized into the following six scales: Emotional Control (7-items; *"I can easily pretend to be mad even when I am really feeling happy"),* Emotional Expressivity (5-items; *"I often laugh out loud"),* Emotional Sensitivity (7-items; *"I am often told that I am a sensitive, understanding person"),* Social Control (7-items; *"I am usually very good at leading group discussions"),* Social Expressivity (7-items; *"I am usually the one to initiate conversations"),* and Social Sensitivity (7-items; *"I am often concerned with what others are thinking of me").* Focal leaders were asked to

indicate the extent to which each statement applied to them on a five-point response scale ranging from 1 (*not at all like me)* to 5 *(exactly like me)*. Internal consistency reliabilities for the shortened scales were as follows: emotional control (α = .50), emotional expressivity (α = .50), emotional sensitivity (α = .71), social control (α = .76), social expressivity (α = .84), and social sensitivity (α = .75). With the exception of emotional control and emotional expressivity, all scales exceeded Nunnally's (1978) recommended Coefficient Alpha cut-off of .70.

Focal leader responses to the shortened version of the Social Skill Inventory used in the present study were subjected to a confirmatory factor analysis to examine the distinctiveness of the six scales. I used LISREL 8.80 software (Jöreskog & Sörbom, 2007) with maximum likelihood estimation to compare the fit of multiple models, ranging from a single-factor model of overall social skill to a nested, 8-factor model comprised of the six social skill dimensions and two broader dimensions (Emotional and Social). The results of these analyses are presented in Table 2.

Considering all fit statistics, the eight-factor, nested model produced the best fit. The eight-factor model showed a better goodness-of-fit (GFI: Tanaka & Huba, 1989), adjusted goodness-of-fit (AGFI: Tanaka & Huba, 1989), comparative fit index (CFI: Bentler, 1990), Tucker-Lewis index (TLI: Tucker & Lewis, 1973), and root-mean-square-error-of-approximation (RMSEA: Browne & Cudeck, 1993) than any of the other models. Although the CFI and TLI are lower than the recommended cutoffs of .90, the RMSEA for the eight-factor model is well below the recommended cutoff of .10 (Browne & Cudeck, 1993). The low CFI and TLI were likely attributable to the limited power afforded by the relatively small sample (N=124).

Transformational leadership. Perceptions of the focal manager's leadership behavior and leadership effectiveness were measured using the Multifactor Leadership Questionnaire – Form 5X (Avolio & Bass, 2002). The MLQ-5X has been used extensively in prior studies of leadership and is considered a well-validated measure of leadership behavior (Awamleh & Gardner, 1999). The full MLQ -5X is comprised of 45 items organized into four broad leadership scales (transformational leadership, transactional leadership, passive/avoidant leadership, and outcomes of leadership) that have been confirmed in prior factor analyses with military and industrial samples (Avolio, 1994; Avolio, Bass, & Jung, 1999; Den Hartog, Van Muijen, & Koopman, 1997). Only the transformational leadership and outcomes of leadership scales were administered for the purposes of the present study.

The four subscales used to assess transformational leadership were Idealized Influence (attributes and behaviors; 8-items; *"I talk about my most important values and beliefs"*), Inspirational Motivation (4-items; *"I articulate a compelling vision of the future"*), Intellectual Stimulation (4-items; *"I seek differing perspectives when solving problems"*), and Individualized Consideration (4-items; *"I spend time teaching and coaching"*). The 24-items on the transformational leadership scale have been found to have strong internal reliability ($\alpha = .95$; Den Hartog, et al., 1997). Additionally, alpha reliability estimates for the transformational leadership subscales have been found to range from .78 (individualized consideration) to .92 (idealized influence). Prior factor analyses suggest that the four transformational leadership subscales are positively intercorrelated and together form one transformational leadership factor (Avolio, Bass, & Jung, 1999). Given that transformational leadership is defined as a higher order construct

comprised of four distinct but highly interrelated scales (Bass & Avolio, 1993; Bass, 1998), the four subscales were averaged to represent the focal leaders' transformational leadership ability.

The current study used self-ratings as well as direct report ratings to operationalize the extent to which focal leaders' exhibit transformational leadership. Focal leaders were asked to indicate the frequency with which they engage in each of the transformational leadership behaviors using a five-point scale ranging from "*not at all*" to "*frequently, if not always*." Direct reports used the same scale to indicate the frequency with which their supervisor/manager engages in each of the transformational leadership behaviors. High levels of internal consistency were evident for both focal leader ($\alpha = .90$) and direct report ($\alpha = .97$) ratings of transformational leadership. To reduce the potential for common method bias, self-ratings of transformational leadership were used to examine the hypotheses in the first Part of this study. In the second study Part, focal leader self-ratings were compared to aggregated direct report ratings of transformational leadership to examine transformational leadership self-awareness.

Prior to aggregating direct reports' ratings of transformational leadership, interrater consistency and agreement were assessed using ICC(1), ICC(K), and $r_{wg(j)}$. Consistent with recommendations provided by LeBreton and Senter (2008), a one-way random effects ICC(1) was calculated to assess absolute interrater consensus and relative rater consistency. ICC(K) was calculated to assess the reliability of the mean ratings assigned by the direct reports (LeBreton & Senter, 2008). ICC(1) = .55; this is a large effect (LeBreton & Sentor, 2008) indicating that group membership influenced direct reports' ratings of their managers' transformational leadership. ICC(K) = .96; this

suggests there are high levels of interrater reliability and agreement and indicates that mean ratings (taken across direct reports) reliably distinguish the 124 focal leaders. In addition, $r_{wg(j)}$ was calculated to assess interrater agreement. The $r_{wg(j)}$ values ranged from .70 to 1.0, exceeding the recommended cut-off of .70 (LeBreton & Senter, 2008) and indicating that strong agreement exists among the set of direct reports for each focal leader. Taken together, the ICC(1), ICC(K), and rwg(j) values indicate that high levels of agreement and consistency exist among the direct reports, and support aggregating transformational leadership ratings to the group (i.e., focal leader) level.

To assess the single factor structure of the transformational leadership scale, I conducted a confirmatory factor analysis using LISREL 8.80 software (Jöreskog & Sörbom, 2007) with maximum likelihood estimation. Focal leader ratings and aggregated direct report ratings of transformational leadership were each subjected to a confirmatory factor analysis. Consistent with prior research (e.g., Avolio, Bass, & Jung, 1999) the one-factor model evidenced acceptable fit for the focal leaders. The fit statistics for the focal leaders (N=124) were as follows: RMSEA = .08, CFI = .93, TLI = .93, GFI = .80, AGFI = .76 (χ^2 =299.45, *df* = 170). The fit statistics for the aggregated direct reports (N=124) were as follows: RMSEA = .14, CFI = .95, TLI = .95, GFI = .70, AGFI = .61 (χ^2 =538.75, *df* = 170). For direct reports, the RMSEA slightly exceeded the recommended cutoff of .10 (Browne & Cudeck, 1993). Additionally, the GFI and AGFI values were low for both focal leaders and direct reports; however, the CFI and TLI were well above the recommended cutoff of .90 (Bentler, 1990, Tucker & Lewis, 1973).

*Outcomes of leadership (dependent variables).*The Extra Effort (4-items; *"I get others to do more than they expected to do"*), Effectiveness (3-items; *"I am effective in*

meeting organization requirements"), and Satisfaction (2-items; *"I work with others in a satisfactory way"*) subscales of the MLQ-5X were used to assess perceptions of leader effectiveness. Focal leaders responded to items on a five-point Likert scale ranging from *"not at all"* to *"frequently, if not always."* Direct reports used the same scale to indicate the frequency with which they observed their manager exhibiting each of the leadership behaviors. Item responses on the extra effort, effectiveness, and satisfaction scales were averaged to form a single overall indicator of leader effectiveness. High levels of internal consistency were evident for both focal leader ($\alpha = .87$) and direct report ($\alpha = .95$) ratings of leader effectiveness.

As described above, ICC(1), ICC(K), and $r_{wg(j)}$ were calculated to assess interrater consistency and agreement on the leader effectiveness items. ICC(1) = .66; ICC(K) = .95, and $r_{wg(j)}$ values ranged from .83 to 1.0. The values obtained for ICC(1) and ICC(K) are large effect sizes, suggesting that effectiveness ratings were influenced by group membership and mean ratings across direct reports reliably distinguish the 124 focal managers. Additionally, the $r_{wg(j)}$ values exceeded the recommended cut-off (LeBreton & Senter, 2008), suggesting high levels of agreement among direct reports.

Podsakoff, MacKenzie, Moorman, and Fetter's (1990) 6-item instrument was used to assess trust in/loyalty to the focal leader. Sample items include, *"I feel a strong sense of loyalty to my manager"* and *"I feel quite confident that my manager will always try to treat me fairly."* Direct reports indicated the degree to which they agreed with each item using a 7-point response scale ranging from *"strongly disagree"* to *"strongly agree."* This scale has evidenced high internal consistency ($\alpha = .90$), and prior confirmatory factor analyses indicate that all of the items load on the intended factor, thus

supporting the unidimensional nature of this construct (Podsakoff, et al., 1990). Consistent with prior studies, a high level of internal consistency ($\alpha = .90$) was evident for direct reports' ratings of trust in the leader.

Again, ICC(1), ICC(K), and $r_{wg(j)}$ were calculated to assess interrater consistency and agreement. ICC(1) = .63 and ICC(K) = .90, indicating that trust ratings were influenced by group membership and suggesting that mean ratings across direct reports reliably distinguish the 124 focal managers. Additionally, $r_{wg(j)}$ values ranged from .70 to 1.0, exceeding the recommended cut-off (LeBreton & Senter, 2008) and indicating that there are high levels of agreement among direct reports' ratings of trust in the leader.

I conducted a confirmatory factor analysis to examine the distinctiveness of direct reports' ratings of leader effectiveness and trust in the leader. I used LISREL 8.80 software (Jöreskog & Sörbom, 2007) with maximum likelihood estimation to compare the fit of two models: a single-factor model of overall leader effectiveness, and a two-factor model comprised of leader effectiveness (Factor 1) and trust in the leader (Factor 2). The results of these analyses are presented in Table 3. Considering all fit statistics, the two-factor model fit the data better than the one-factor model. The two-factor model showed a better goodness-of-fit (GFI: Tanaka & Huba, 1989), adjusted goodness-of-fit (AGFI: Tanaka & Huba, 1989), and root-mean-square-error-of-approximation (RMSEA: Browne & Cudeck, 1993), and had both comparative fit index (CFI: Bentler, 1990) and Tucker-Lewis index (TLI: Tucker & Lewis, 1973) values above the recommended cutoffs of .90. All items in the two-factor model loaded reliably on their predicted factors, with the lowest loading being .64. The factor correlation was .78. Given the inherent relatedness of perceptions of leader effectiveness and trust in the leader, a relatively high

factor correlation was expected, but this correlation was not high enough to suggest multicollinearity among the factors.

Control variables. Emotional intelligence is related to but distinct from social skill and has frequently been studied as an antecedent of transformational leadership (Harms & Crede, 2010); therefore, I chose to control for emotional intelligence. The 16-item Wong and Law Emotional Intelligence Scale (WLEIS; Wong and Law, 2002) was used to control for focal leader emotional intelligence. The WLEIS is organized into the following four subscales that correspond to Salovey and Mayer's (1990) definition of emotional intelligence: self-emotions appraisal (4-items; *"I really understand what I feel"*), others-emotions appraisal (4-items; *"I have good understanding of the emotions of people around me"*), use of emotion to facilitate performance (4-items; *"I would always encourage myself to try my best"*), and regulation of emotion (4-items; *"I can always calm down quickly when I am very angry"*). Focal leaders were asked to indicate the extent to which they agree with each item using a 7-point Likert-type scale ranging from *"strongly disagree"* to *"strongly agree."*

The 16-item scale has been cross-validated with three student samples, 116 non-teaching employees from a university, and 149 supervisor-subordinate dyads (Wong & Law, 2002). In prior studies, internal consistency estimates for each of the four factors ranged from .83 to .90 (Wong & Law, 2002). Factor analytic results confirm the four-factor solution (CFI = .95; TLI = .93) with average loadings of the 16 items on their respective emotional intelligence dimensions equal to .80 and no cross-loadings exceeding .37 (Wong & Law, 2002). As expected, the WLEIS has been found to be only minimally correlated with intelligence, and moderately and negatively correlated with

powerlessness (Wong & Law, 2002). Similarly, the WLEIS scales were found to be distinct from the Big Five personality dimensions (Wong & Law, 2002). In the present study, internal consistency estimates were as follows: Self Emotional Appraisal ($\alpha = .91$), Other Emotional Appraisal ($\alpha = .88$), Use of Emotion to Facilitate Performance ($\alpha = .88$), and Regulation of Emotion ($\alpha = .92$).

To assess the factor structure of the WLEIS, I conducted a confirmatory factor analysis using LISREL 8.80 software (Jöreskog & Sörbom, 2007) with maximum likelihood estimation. Consistent with previous studies (e.g., Wong & Law, 2002), the four factor model evidenced strong fit. The fit statistics for the focal leaders (N=124) were as follows: RMSEA = .09, CFI = .94, TLI = .92, GFI = .84, AGFI = .80 (χ^2 =190.34, *df* = 98). All items loaded reliably on their specified factor, with loadings ranging from .56 to .96.

A number of additional variables were collected in an effort to control for potential confounding effects. Gender has been found to be related to leadership behavior in that women tend to use relationship-based, inspirational influence tactics more frequently than men (Eagly & Johnson, 1990). Additionally, women have been found to exhibit higher levels of social skill than men (Groves, 2005).Therefore, I controlled for the gender of the focal leader. I also controlled for the focal leader's tenure, as exposure to organizational norms and processes may be positively related to perceptions of leadership behavior. Similarly, I included direct reports' time with the focal manager as a control variable to account for variations in attributions of social skill and leadership behavior based on experience with the focal leader.

To account for differences in the nature of managerial work and the likelihood that increased managerial experience is positively associated with leadership behaviors, I controlled for the focal leader's organizational level (i.e., front-line supervision versus mid- to upper-management). Finally, because leaders' abilities to influence their direct reports may diminish as the number of direct reports increases, I included the number of employees reporting to the focal leader as a control variable.

CHAPTER 4: RESULTS

The results of this study were conducted in two Parts. In the first Part, I examined transformational leadership as a mediator of the social skill – leader effectiveness/trust in the leader relationship (Hypotheses 1 to 10f). For this Part of the study, I used focal leaders' self-ratings of social skill (level 2) and direct reports' ratings of transformational leadership, leader effectiveness, and trust in the leader (level 1). In the second Part of the study, I used polynomial regression and response surface analysis to examine the relationship between transformational leadership self-awareness (i.e., alignment between focal leader and direct report ratings of transformational leadership) and focal leader social skill (Hypotheses 11a – 11b).

Part One: Social Skill, Transformational Leadership, and Outcomes of Leadership

Data Preparation and Descriptive Statistics

Prior to conducting the primary analyses, the study variables were examined for out of range values and missing data. No out of range values were found for the focal leaders; however, eight direct reports evidenced mean scores on the transformational leadership, leader effectiveness, and/or trust in the leader scales that differed from the study mean by ±3.5 standard deviations. These scores, which were so far from the mean of the distribution that they were probably errors, were considered outliers and were removed from the final sample.

The amount of missing data for all variables was less than five percent. Given the relatively large sample size and the random nature of the missing values, such low levels of missing data were deemed unlikely to distort the results of the study (Tabachnick & Fidell, 2006); therefore, no further investigation of the missing data was necessary. However, because Hierarchical Linear Modeling (HLM) cannot be conducted with missing data, mean substitution was used to replace missing values on each of the focal variables.

Means, standard deviations, intercorrelations, and Cronbach alphas are reported in Table 4. With the exception of two of the Social Skill scales (Emotional Control and Emotional Expressivity), all of the measures met or surpassed Nunnally's (1978) recommended Coefficient Alpha level of .70. As indicated by the small standard deviations, low levels of variability were evident across all of the focal study variables as rated by both focal leaders and direct reports. The average standard deviation across focal leaders' ratings on the six social skill dimensions was only .64 on a five-point Likert scale. Similarly, the standard deviations for focal leaders' and direct reports' ratings of transformational leadership were only .43 and .83, respectively. Such low levels of variance may have attenuated the observed relationships (Hallahan & Rosenthal, 1996).

The pattern of correlations among the Social Skill subscales was largely consistent with previous findings (Riggio, 1986). Significant negative relationships were evident between Social Sensitivity and Social Control ($r = -.28$, $p < .01$) and between Emotional Sensitivity and Emotional Expressivity ($r = -.32$, $p < .01$). However, the bivariate correlations among transformational leadership, perceptions of leader effectiveness, and trust in the leader ratings were only partially consistent with the

hypothesized model. Similarly, direct report ratings of leader effectiveness and focal leader ratings of leader effectiveness were not significantly correlated (r = .08, n.s.). Such discrepancies have been commonly reported in the performance appraisal and self-awareness literatures (Ostroff, Atwater, & Feinberg, 2004).

Given the strong correlations between direct report ratings of transformational leadership and both leader effectiveness (r = .89) and trust in the leader (r = .73), I conducted a confirmatory factor analysis to examine the discriminant validity of these measures. I used LISREL 8.80 software (Jöreskog & Sörbom, 2007) with maximum likelihood estimation to compare the fit of three theoretically plausible models: a single-factor model of transformational leadership and overall leader effectiveness, a two-factor model of transformational leadership (Factor 1) and leader effectiveness/trust in the leader (Factor 2), and a three-factor model comprised of transformational leadership (Factor 1), leader effectiveness (Factor 2) and trust in the leader (Factor 3). The results of these analyses are presented in Table 5.

Considering all fit statistics, the three-factor model fit the data better than either the one- or two-factor models. The three-factor model showed a slightly better goodness-of-fit (GFI: Tanaka & Huba, 1989), adjusted goodness-of-fit (AGFI: Tanaka & Huba, 1989), and root-mean-square-error-of-approximation (RMSEA: Browne & Cudeck, 1993), and had both comparative fit index (CFI: Bentler, 1990) and Tucker-Lewis index (TLI: Tucker & Lewis, 1973) values above the recommended cutoffs of .90. All items in the three-factor model loaded on their predicted factors, with the lowest loading being .64. As expected, transformational leadership was strongly correlated with perceptions of leader effectiveness (r = .94) and trust in the leader (r = .77). Such a high factor

correlation between transformational leadership and perceptions of leader effectiveness suggests that multicollinearity may exist among the factors. The factor correlation between perceptions of leader effectiveness and trust in the leader was .78. A relatively high factor correlation was expected between these factors, but this correlation was not high enough to suggest multicollinearity.

Neither of the direct report control variables (i.e., years reporting to focal manager and organizational tenure) was related to any of the dependent variables; therefore, the direct report control variables were omitted from further analyses. Only focal leaders' organizational level was significantly correlated with the dependent variables, as rated by direct reports. Therefore organizational level was retained as a control variable, and all other control variables (i.e., organizational tenure, sex, number of direct reports, and emotional intelligence) were excluded from tests of the hypothesized relationships.

Analytical Approach

The data in Part one of the study were multilevel in nature, with social skill at the focal leader level (level 2) and transformational leadership, perceptions of leader effectiveness, and trust in the leader at the direct report level (level 1). To take into account the multi-level data structure, I used hierarchical linear modeling (HLM: Bryk & Raudenbush, 1992; Hofmann, 1997) to test the hypothesized cross-level relationships. The analyses were conducted using HLM 6.05. Given the relatively large level 2 sample size (N = 124), t values based on generalized least squares (GLS) standard errors are reported (Hofmann, Morgeson, & Gerras, 2003).

Prior to conducting the full HLM analyses, I calculated an Interclass Correlation Coefficient (ICC1) for the null models with no predictors to assess the amount of

meaningful between-group variance. For the model with perceptions of leader effectiveness as the outcome, the ICC1 was .24, indicating (in the usage of ICC1 for multilevel modeling) that 24 percent of the variance in perceptions of leader effectiveness may be explained by between group factors. For the model with trust in the leader as the outcome the ICC1 was .16, indicating that 16 percent of the variance in trust in the leader may be explained by between group factors.

Hypothesis Testing Using Hierarchical Linear Modeling

Table 6 provides a summary of the models and results used to test Hypotheses 1 through 10f. The level 1independent variable (i.e., transformational leadership) was grand mean centered prior to entry based on recommendations provided by Hofmann and Gavin (1998). Hypothesis 1 predicted that transformational leadership would be positively related to perceptions of leader effectiveness. The results of the HLM analysis indicated that direct report ratings of transformational leadership were significantly related to direct report ratings of leader effectiveness (γ_{10} =.89, p<.01, R^2 =.73), supporting Hypothesis 1. Hypothesis 2 predicted that transformational leadership would be positively related to trust in the leader. Again, the results of the HLM analysis indicated that direct report ratings of transformational leadership were significantly related to direct report ratings of trust in the leader (γ_{10} =.78, p<.01, R^2 =.46), thus supporting Hypothesis 2.

Hypotheses 3 through 8 predicted that each of the six dimensions of social skill would be positively related to transformational leadership. Although the six-factor structure of the social skill measure was not supported in the confirmatory factor analysis (see Table 2), I chose to proceed in testing the relationships between each of the six dimensions of social skill and transformational leadership because those were the

relationships I hypothesized. Contrary to Hypotheses 3 through 8, the results of the HLM analyses (Models 3 to 8 in Table 6) indicated that focal leader ratings of social sensitivity (γ_{02} =.01, p>.05), emotional sensitivity (γ_{02} =.01, p>.05), social expressivity (γ_{02} =.00, p>.05), emotional expressivity (γ_{02} = -.01, p>.05), social control (γ_{02} = -.01, p>.05), and emotional control (γ_{02} = -.01, p>.05), were not significantly related to direct report ratings of transformational leadership. Thus, Hypotheses 3 through 8 were not supported nor did I proceed in calculating an R^2 value for each relationship. The lack of significant coefficients suggests that the dimensions of social skill are not important predictors of direct report ratings of transformational leadership.

Hypotheses 9a through 9f predicted that transformational leadership would mediate the relationship between each dimension of social skill and perceptions of leader effectiveness. Similarly, Hypotheses 10a through 10f predicted that transformational leadership would mediate the relationship between each dimension of social skill and trust in the leader. Consistent with Kenny, Kashy, and Bolger's (1998) approach to testing mediation, the first step is to demonstrate that the independent variable is significantly associated with the potential mediator. Given that none of the focal leader ratings of the social skill dimensions were statistically significantly associated with direct report ratings of transformational leadership, the first precondition for mediation was not met. Therefore, the mediated relationships (Hypotheses 9a through 10f) were not supported.

The next step in testing mediated relationships would normally be to demonstrate that the mediator is significantly related to the outcome variable while controlling for the independent variable (Kenny, Kashy, & Bolger, 1998). For the sake of thoroughness, I

have included the results of this final step in Table 6 (Models 9 through 19). As evidenced in the table, when the dimensions of social skill were included in the model, transformational leadership remained a significant predictor of both leader effectiveness ($\gamma_{10} = .89$, $p < .01$) and trust in the leader ($\gamma_{10} = .78$, $p < .01$). However, none of the social skill dimensions were significantly associated with either of the outcome variables.

Supplemental Analyses

The analyses presented above were conducted using the focal leaders' self-ratings on the six social skill dimensions and direct reports' ratings of their leader's transformational leadership, perceptions of leader effectiveness, and trust in the leader. As noted previously, discrepancies were evident between focal leaders' ratings of transformational leadership and direct reports' ratings of the focal leader. Therefore, as a follow-up to the original analyses, I re-examined the hypothesized relationships using focal leader self-ratings of their transformational leadership. HLM was used to test the relationship between leader self-ratings of transformational leadership (level 2 variable) and direct reports' ratings of leader effectiveness and trust in the leader (level 1 variables). The results of these analyses are presented in Table 7.

The results of the supplemental HLM analyses showed that focal leaders' self-ratings of transformational leadership were not significantly related to direct report perceptions of either leader effectiveness ($\gamma_{02} = .01$, $p > .05$) or trust in the leader ($\gamma_{02} = -.01$, $p > .05$). Although direct reports' ratings of transformational leadership were strongly, positively related to both outcome variables, these relationships were not statistically significant when focal leader ratings were used.

Hypotheses 3 through 8 were also re-examined using focal leader self-ratings of transformational leadership. Given that both variables were measured at the focal leader level, it was not necessary to use HLM to test these relationships. Instead, hierarchical linear regression equations were calculated for each of the six dimensions of social skill. Hierarchical linear regression here simply refers to entering the variables in two steps; the control variables (i.e., focal leaders' organizational level and number of direct reports) were entered at step one and the social skill variables were entered at step two. Results are presented in Table 8.

The focal leaders' organizational level and number of direct reports were both significantly related to focal leaders' ratings of transformational leadership; therefore, both were simultaneously entered as control variables in model one. Together these variables accounted for only 3% of the variance in focal leaders' ratings of transformational leadership. Each dimension of social skill was entered separately in models 2a through 2f. As evidenced in the table, emotional sensitivity (b= 0.18, $p < .01$), social expressivity (b= 0.20, $p < .01$), and social control (b= .24, $p < .01$) were significantly associated with focal leaders' self-ratings of transformational leadership. Emotional sensitivity, social expressivity, and social control accounted for an additional 7%, 13%, and 13% of the variance in transformational leadership, respectively. The other dimensions of social skill (i.e., social sensitivity, emotional expressivity, and emotional control) were not significantly related to transformational leadership.

Given that the eight-factor structure comprised of six social skill dimension factors and two higher order factors (social and emotional) resulted in the best fit (see Table 2), as an additional analysis I chose to examine the social (i.e., social expressivity,

social sensitivity, and social control) and emotional (i.e., emotional expressivity, emotional sensitivity, and emotional control) dimensions of social skill as predictors of focal leaders' ratings of transformational leadership. Social and emotional scale scores were calculated by averaging focal leaders' scores across the items within each dimension. The results of these regression analyses are presented in Table 9. The social dimension was significantly associated with focal leader ratings of transformational leadership ($b = 0.40$, $p < .01$), accounting for an additional 14% of the variance in transformational leadership beyond the effects of the control variables. The emotional dimension was also significantly associated with focal leader ratings of transformational leadership ($b = 0.31$, $p < .05$), accounting for an additional 6% of the variance. These findings contradict the null relationships found when using direct reports' ratings of transformational leadership as the outcome variable.

The results of the supplemental analyses suggest that source factors strongly influenced the results of Part One. Significant relationships were evident between same-source ratings of the focal constructs; however, these relationships became non-significant when examined across sources (i.e., focal leader ratings of transformational leadership and direct report ratings of leader effectiveness). Additionally, same source ratings of different constructs (i.e., transformational leadership and leader effectiveness) were more highly correlated than across source ratings of the same constructs, suggesting that discrepancies existed between direct report and focal leaders' perceptions of the focal constructs. There are several factors that may contribute to discrepancies between direct reports and focal leader perceptions of transformational leadership and leader

effectiveness. In Part Two, I examine one possible factor – social skill – and the way in which it is related to discrepancies in ratings of transformational leadership.

Part Two: Transformational Leadership Self-Awareness and Social Skill

The purpose of Part Two was to examine the relationship between social skill and transformational leadership self-awareness. Specifically, I used a polynomial regression framework to examine the bivariate relationship between social skill and transformational leadership self-awareness. For the purpose of this analysis, the transformational leadership self-awareness variable was defined by two variables (i.e., focal leader ratings and direct report ratings of transformational leadership). Additionally, the precedent for ignoring the direction of the relationship between predictors and outcomes and instead focusing on what makes most sense based on the research question when conducting polynomial regression analyses has already been established in the self-awareness literature. Vecchio and Anderson (2009) used self, superior, peer, and subordinate ratings as independent variables and sex, age, social dominance, and social sensitivity as dependent variables in their study of the way in which personality and demographic attributes are related to rating congruence.

Analytical Approach

Researchers have historically used difference scores to examine self-awareness. This approach involves calculating the difference between self-ratings and other-ratings, and using these difference scores to categorize people as in-agreement low, in-agreement high, under-raters, and over-raters (Atwater & Yammarino, 1992). Difference scores are relatively easy to interpret and thus useful in practice; however, they have several

shortcomings that hinder their usefulness for academic research (Edwards & Parry, 1993; Edwards, 2001, 2002).

First, difference scores tend to be unreliable (Edwards, 2002). When the X and Y variables are correlated, as they typically are in congruence research, the difference score is less reliable than either X or Y. Additionally, difference scores lead to ambiguous interpretation since two distinct component measures (i.e., self- and other-ratings) are collapsed into one score (Edwards, 2002). By collapsing two distinct measures, difference scores confound the influence of each component measure and mask the individual effects of each of the component measures on the outcome variable (Brutus, Fleenor, & McCauley, 1999; Edwards, 2002). Finally, difference scores reduce what should be a three-dimensional model to two-dimensional space, resulting in the loss of valuable information (Edwards, 2002).

As noted by Edwards (2002), polynomial regression and response surface analysis are robust analytic techniques that offer many advantages over difference scores. In particular, polynomial regression and response surface analysis help us to overcome the confounded effects and ambiguous interpretation that result when using difference scores. Additionally, these techniques allow us to model relationships in three-dimensional space, thus offering a more complete picture of the complex relationship between the independent component variables and the outcome variable.

I used the polynomial regression and response surface analysis procedures outlined by Shanock, Baran, Gentry, Pattison, and Heggestad (2010) to examine the relationship between social skill and direct report – focal leader agreement on ratings of

transformational leadership (i.e., transformational leadership self-awareness)[2]. The six dimensions of social skill (SS) were regressed on focal leader self-ratings of transformational leadership (FLTL), direct report ratings of transformational leadership (DRTL), the interaction between self and other ratings (DRTL*FLTL), squared manager self-ratings , and squared direct report ratings. The generic polynomial regression equation for this analysis is as follows: $SS' = b_0 + b_1DRTL + b_2FLTL + b_3DRTL^2 + b_4(DRTL * FLTL) + b_5FLTL^2 + e$. Using this equation, it was possible to examine the unique influence of the two ratings sources, the interaction between rating sources, and the curvilinear relationships in the squared terms.

To enhance interpretation, the polynomial regression results were graphed using response surface analysis, which provides a three dimensional representation of the relationship between each of the component measures (focal leader and direct report ratings of transformational leadership) and the dimensions of social skill. Response surface analysis makes it particularly easy to see how the degree of over- or under-rating is related to changes in the outcome variable. To interpret the response surface analysis, I first examined the slope and shape of the line of perfect agreement (X=Y). A significant, positive X=Y slope would indicate that when transformational leadership ratings are in agreement, transformational leadership ratings increases as ratings of social skill increase.

[2] An alternative analytic approach would have been to use multivariate regression with the discrepancy between self and other ratings of transformational leadership as the dependent variable. This approach would have allowed me to conduct an omnibus multivariate test based on Wilks's Λ to examine whether the relationship between social skill and self-other ratings of transformational leadership (considered jointly) is significant overall. A statistically significant Wilks's Λ would indicate that social skill is related to self and other ratings of transformational leadership, considered jointly. However, this approach does not provide nuanced information regarding the direction and degree of the discrepancy, both of which can be examined using polynomial regression. Additionally, the results of a multivariate regression can only be plotted as a two-way interaction. Response surface analysis provides a more robust depiction of the way in which the relationships change depending on the level of agreement between self and other ratings. I therefore chose to use polynomial regression and response surface analysis for the purpose of the present study.

Next, I examined the curvature along the line of perfect agreement to determine if the relationship between transformational leadership ratings and social skill was linear or curvilinear. Non-significant curvature along the line of perfect agreement would indicate that when transformational leadership ratings are in agreement, the relationship between transformational leadership and social skill is linear (i.e., no curvature).

The next step was to assess how the degree of discrepancy between direct report and focal leader ratings is related to social skill. By examining the line of incongruence (X=-Y), it was possible to determine the level of social skill as manager ratings and direct report ratings of transformational leadership diverged. Significant curvature along the line of incongruence depicts how the degree of discrepancy between the rating sources influences the outcome (Shanock et al., 2010). For example, significant negative curvature would mean that social skill decreases more as focal leader self-ratings and direct report ratings of transformational leadership become increasingly discrepant.

Using polynomial regression and response surface methodology, it is also possible to examine the extent to which the direction of the discrepancy is related to social skill. This would be accomplished by looking at the slope along the line of incongruence (X=-Y) to determine if the outcome is affected more when X > Y (i.e., manager self-ratings of transformational leadership were higher than direct report ratings of transformational leadership) or X < Y (i.e., direct report ratings of transformational leadership were higher than manager self-ratings of transformational leadership). This step was not interpreted for the purposes of the present study as no hypotheses were offered regarding the direction of the discrepancy.

Hypothesis Testing Using Polynomial Regression and Response Surface Analysis

Prior to conducting the polynomial regression analyses, direct report ratings of transformational leadership were aggregated. Means, standard deviations, and correlations using aggregated direct report ratings are presented in Table 10. Mean focal leader self-ratings of transformational leadership (M = 4.08) were somewhat inflated relative to direct report ratings of transformational leadership (M = 3.89), a commonly observed finding in the self-awareness literature (e.g., Church, 1997; Ostroff, et al., 2004; Van Velsor, Taylor, & Leslie, 1993). Table 10 also presents the correlations between focal leader and direct report ratings of transformational leadership and scores on the social skill dimensions. Focal leaders' self-ratings of transformational leadership were significantly and positively related to scores on the social control (r = .33, p < .01), social expressivity (r = .38, p < .01), and emotional sensitivity (r = .28, p < .01) dimensions of social skill. Direct report ratings of transformational leadership were not significantly related to any of the social skill dimensions.

Additionally, I examined the base rate of discrepancies between focal leader ratings of transformational leadership and direct report ratings of transformational leadership (Shanock et al., 2010). Consistent with Fleenor, McCauley, and Brutus' (1996) recommendations, I calculated standardized scores for each predictor variable (i.e., focal leader self-ratings of transformational leadership and direct report ratings of their focal leader's transformational leadership). Scores for each focal leader were considered discrepant if the standardized score on one predictor variable was half a standard deviation above or below the other predictor variable. As evidenced in Table 11, rating discrepancies existed in one direction or the other for nearly half of the sample.

Next, I used polynomial regression and response surface analysis to test Hypotheses 11a and 11b. The focal leader and direct report ratings of transformational leadership were used as independent variables and each of the six dimensions of social skill as dependent variables. As recommended by Shanock et al. (2010), the predictors were centered around the midpoints of their respective scales to aid interpretation and reduce the potential for collinearity. Focal leader and direct reports' transformational leadership scores ranged from one to five; therefore, scores were centered by subtracting the scale midpoint of 2.5. Table 12 presents the results of the polynomial regression analyses for all six dimensions of social skill, including regression coefficients for the calculated slopes and curvatures for the line of congruence and the line of incongruence. Response surface graphs for each of the analyses are presented in Figures 3 through 8.

Hypothesis 11a predicted that when focal leader and direct report ratings of transformational leadership were in-agreement, social skill would be positively related to transformational leadership. To test this hypothesis, I examined the slope along the line of perfect congruence (X=Y). Polynomial regression analyses failed to show any statistically significant relationship between social skill and transformational leadership ratings among those whose self- and other-ratings were in-agreement. As evidenced in Table 12, none of the regression coefficients for the slope of the line of perfect congruence (X = Y) were statistically significant. If the relationships were significant, I would have expected to see a positive slope along the line of perfect congruence in the response surface plots. No hypotheses were offered regarding the nature of the curvature along the line of perfect congruence.

Hypothesis 11b predicted that when focal leader ratings of transformational leadership were greater than direct report ratings of transformational leadership or vice versa, social skill would be lower than when focal leader and direct report ratings of transformational leadership were in-agreement. This hypothesis was tested by examining the curvature along the line of perfect incongruence (X = -Y). As evidenced in Table 12, only the social sensitivity regression coefficient was statistically significant; however, this relationship was in the opposite direction of that which I predicted. If the hypothesis were supported, I would have expected to see negative curvature along the line of perfect incongruence such that focal leaders whose transformational leadership ratings were increasingly discrepant in either direction (i.e., over- or under-raters) would have lower social skills. No hypotheses were offered regarding the slope of the line of perfect incongruence (X = -Y). Taken together, the results of the polynomial regression analyses fail to support Hypotheses 11a and 11b.

CHAPTER 5: DISCUSSION

Review of Part One: Social Skill, Transformational Leadership, and Outcomes of Leadership

In response to the substantial body of literature that highlights the benefits of transformational leadership for employees and the organization (e.g., Bycio, Hackett, & Allen, 1995; Herold, et al., 2008; Howell & Hall-Merenda, 1999; Podsakoff, MacKenzie, & Bommer, 1996), the present study sought to advance our knowledge of individual difference factors that might contribute to higher levels of transformational leadership. In Part One, I examined transformational leadership as a mediator of the relationship between social skill and both perceptions of leader effectiveness and trust in the leader. Consistent with prior research (e.g., Podsakoff, MacKenzie, & Bommer, 1996), direct report ratings of transformational leadership were found to be positively related to direct report ratings of both perceptions of leader effectiveness and trust in the leader. These results suggest that direct reports who perceive their leader to be transformational are more likely to rate their leader as effective and express trust in their leader, thus replicating previous findings (e.g., Dirks & Ferrin, 2002; Lowe et al., 1996) and providing support for Hypotheses 1 and 2. However, Hypotheses 3 through 8 were not supported, as focal leader ratings of social skill were not found to be significant predictors of direct reports' ratings of transformational leadership. Finally, in tests of the

mediated model using focal leaders' ratings of social skill and direct reports' ratings of transformational leadership and both outcome variables, only transformational leadership emerged as a significant predictor of leader effectiveness and trust in the leader. Therefore, Hypotheses 9a through 10f were not supported.

Supplemental analyses revealed that the significance of the relationship between transformational leadership and both leader effectiveness and trust in the leader was dependent upon the rating source. Specifically, the relationships were only significant when same source ratings were used for all constructs. In contrast, when cross-source ratings (i.e., focal leader ratings of transformational leadership and direct report ratings of leader effectiveness and trust in the leader) were used, the relationships between transformational leadership and each of the outcome variables were non-significant.

Similar source effects were evident in the relationships between the six dimensions of social skill and transformational leadership. When using cross-source ratings (i.e., focal leader ratings of social skill and direct report ratings of transformational leadership), none of the dimensions of social skill were significantly related to transformational leadership. However, when focal leader ratings of both social skill and transformational leadership were used, three of the six social skill dimensions (i.e., social control, social expressivity, and emotional sensitivity) were significantly related to transformational leadership. These results suggest that meaningful discrepancies in perceptions of transformational leadership exist between focal leaders and their direct reports.

Discrepancies between Focal Leader and Direct Report Ratings

Consistent with prior research (e.g., Ostroff et al., 2004), discrepancies between focal leader and direct report ratings were expected. Such discrepancies have commonly been reported in the self-awareness and performance appraisal literatures (Harris & Schaubroeck, 1988; Mabe & West, 1982; Ostroff et al., 2004), and suggest that focal leaders often lack awareness of how they are perceived by others (i.e., direct reports, peers, supervisors), a point to which I return in the review of Part Two. In an early review of self-other agreement studies, Shrauger and Schoeneman (1979) found modest to strong correlations between self-ratings and the way in which the self-rater *assumed* he/she would be perceived by others; however, *actual* ratings made by others were only weakly correlated with self-ratings. This finding appears to hold regardless of whether ratings are based on performance, leadership behaviors, or personality traits (Ostroff et al., 2004). The observed discrepancies between focal leader and direct report ratings, though not problematic in and of themselves, help to explain why the relationships tested using same source ratings (e.g., direct report ratings of both transformational leadership and leader effectiveness) were significant whereas cross-source ratings resulted in non-significant results.

There are several factors that have been found to be related to the agreement, or lack thereof, between self and other ratings. Race, gender, age, and managerial experience have been found to be related to self-ratings, such that older, non-White males with higher levels of managerial experience tend to overrate their leadership behaviors (Atwater & Yammarino, 1997; Brutus, Fleenor, & McCauley, 1999; Ostroff et al., 2004). The manager's functional area has also been found to be related to rating discrepancies

such that those in service-oriented areas were more likely than those in technical areas to be over-raters (Ostroff et al., 2004). In the present study, the majority of participants (focal leaders and their direct reports) worked in non-technical, service-based functions, a factor which may have contributed to the observed discrepancies between focal leader and direct report ratings of transformational leadership. Additionally, the majority of focal leaders (72 percent) were male and more than half had worked with the study organization for more than sixteen years. Such demographic characteristics may have also contributed to the relatively large proportion of over-raters in the sample and the observed discrepancies between focal leader and direct report ratings.

Contextual/Organizational Factors Affecting Focal Leader and Direct Report Ratings

There are several additional factors unique to the study organization that may have contributed to the observed rating discrepancies and the strong correlations between same-source ratings of transformational leadership, leader effectiveness, and trust in the leader. As a midsize natural gas company housed in the Southeastern United States, the study organization has a very traditional, hierarchical structure. Additionally, many of the study organization's front-line employees are members of the union. Although for confidentiality reasons I was not allowed to ask about union membership, many of the direct reports who responded to the survey – particularly those in the Operations department – were likely members of the union. Within this traditional structure and particularly among unionized workers, it may not be as necessary for leaders to exhibit the behaviors associated with transformational leadership in order to be perceived as effective by their direct reports. Instead transactional leadership behaviors such as clearly outlining job expectations, rewarding/incentivizing desired behaviors, and enforcing rules

in an effort to avoid mistakes (Avolio, Bass, & Jung, 1999; Yukl, 2006) may be perceived as more effective. The transformational leadership ratings obtained from direct reports for the purpose of the present study may thus have been influenced by a halo effect, such that those direct reports who like their leader rated him/her higher in terms of transformational leadership than those who dislike their leader. In an effort to alleviate such halo effects, direct reports were asked to think about specific instances of their leader's behavior when responding to survey items. However, given the high correlation between direct reports' ratings of transformational leadership and leader effectiveness (r = .89), it seems likely that halo effects confounded direct reports' ratings and attenuated the observed cross-source relationships.

The study organization's historical context may also have influenced participants' – particularly direct reports' – survey responses. Over the past ten years, the organization has experienced a change in senior leadership and a drastic shift in their organizational culture. Current organizational leaders have attempted to create a more inclusive, participative culture in which cross-functional collaboration is common and strategic decision-making occurs across organizational levels. As part of this culture change, the organization implemented a bi-annual employee satisfaction survey. Given the uncertain circumstances under which the satisfaction survey was initially launched, it was received by employees, particularly those in front-line operations and customer service roles, with a great deal of skepticism.

Such skepticism persists to this day, with many employees expressing fears that the satisfaction survey is not confidential and their responses will affect their standing with the organization. Similar fears may have affected participants' responses to the

survey used for the purposes of the present study. In particular, direct reports may have been fearful of providing negative feedback about their leader and therefore artificially inflated their ratings. Such inflation may have contributed to the discrepancy between direct reports and focal leader ratings, and may help to explain the strong observed correlations between same-source ratings of different constructs (e.g., transformational leadership and perceptions of leader effectiveness). I attempted to alleviate such concerns by using an independent survey website that was distinct from the study organization's internal portal, emphasizing the confidentiality of participant responses, and stressing that the results were to be used exclusively for research purposes. However it is still possible that participants' skepticism about surveys in general may have affected their responses and confounded the observed relationships.

Measurement Issues Affecting Focal Leader and Direct Report Ratings

The results of Part One were also confounded by issues in the measurement of social skill. As discussed previously, Riggio's (1986) 90-item Social Skill Inventory was shortened for the purpose of the present study. Both conceptual sorting by expert raters and data-driven item analyses were used to shorten the Social Skill Inventory. This rigorous process resulted in a 40-item scale organized into seven-item subscales for social expressivity, social sensitivity, social control, emotional sensitivity, and emotional control and a five-item subscale for emotional expressivity.

Although careful statistical and conceptual analyses were used to shorten the Social Skill Inventory (Riggio, 1986), it is unclear how reducing the measure to 40 items affected its construct validity. The six factor structure of the shortened social skill inventory was not supported in the present study. The confirmatory factor analytic results

indicated that an eight factor model comprised of six dimension-level factors and two higher-order factors (i.e., social and emotional) produced the best fit. Although the eight factor model resulted in better fit than the other theoretically plausible models that were tested (see Table 2), several of the fit statistics (i.e., the CFI and TLI) remained well below the recommended cut-off of .90 (Browne & Cudeck, 1993).

As expected, small to moderate correlations were found between the emotional dimensions of social skill (i.e., emotional expressivity, emotional sensitivity, and emotional control) and the Wong and Law Emotional Intelligence Scale (WLEIS; Wong and Law, 2002). However, all of the social dimensions (i.e., social expressivity, social sensitivity, and social control) were also correlated with one or more of the Emotional Intelligence dimensions. The results thus fail to support the discriminant validity of the social skill measure used in the present study, and suggest that the shortened measure may not accurately distinguish between the six dimensions of social skill. The criterion-related validity of the shortened social skill measure was also questionable, as the dimensions of social skill exhibited only moderate correlations with focal leaders' ratings of both transformational leadership and leader effectiveness, and non-significant correlations with direct report ratings of transformational leadership, leader effectiveness, and trust in the leader. These results contradict Riggio and colleague's (2003) finding that social skill was positively related to perceptions of leader effectiveness. Together, the results fail to provide conclusive evidence of the construct validity of the shortened social skill measure.

The poor fit statistics and lack of construct validity evidenced for the shortened social skill inventory may have resulted from random responding, confusion about the

items themselves, and/or misalignment between the items and the workplace context. Focal leaders' responses to many of the reverse coded items (e.g., *I am rarely able to hide a strong emotion; I would feel out of place at a party attended by a lot of very important people)* were inconsistent with responses to other items on the same scales. It is possible that participants responded randomly to the social skill items. Alternatively, these items may have been confusing to participants. The observed relationships between social skill and transformational leadership may thus have been attenuated by a lack of validity in the measurement of social skill.

Additionally, the items used to assess social skill were not tailored to reflect the workplace context. Instead, most items referred to general social/emotional tendencies and several asked specifically about participants' social tendencies at parties. As noted by Schmit, Ryan, Stierwalt, and Powell (1995), one's frame of reference when responding to personality or similar individual difference assessments not only changes his/her responses but also changes the criterion-related validity of the test. Asking participants to think about their social and emotional behavior in general likely resulted in different responses than would have been obtained had the items referred specifically to the workplace. Moreover, had participants thought about their social/emotional behavior "at work" when responding, their scores may have been more strongly related to their leadership behavior at work.

Assuming that social skill and transformational leadership were relevant in the context of the study organization and the measure of social skill was valid, the null results obtained in the present study would have several implications. First, the lack of statistically significant relationships between the emotional dimensions of social skill (as

rated by focal leaders) and transformational leadership (as rated by direct reports) stand in contradiction to prior findings (e.g., Barbuto & Burbach, 2006; Harms & Crede, 2010), suggesting that emotional skills may not be as important for transformational leaders as previously reported. Additionally, the null relationships between the social dimensions of social skill (as rated by focal leaders) and transformational leadership (as rated by direct reports) suggest that managers may not need to be eloquent or charismatic speakers, or even be adept at interpreting various social cues to be perceived as transformational. Instead, other individual difference factors such as managers' level of adaptability and/or cynicism about organizational change (Bommer et al., 2004) may be more relevant antecedents of transformational leadership. Alternatively, organizational factors such as the culture and/or structure of the organization, performance management processes (e.g., the way in which managerial behaviors are rewarded/recognized), and/or the managers' peer context may be more strongly related to transformational leadership.

Despite the largely non-significant relationships observed in Part One, the results of the present study reinforce the need to further examine the relationship between social/emotional skills and transformational leadership (Riggio & Reichard, 2008). Whereas prior studies have focused largely on *emotional* skills as predictors of transformational leadership (e.g., Barling, Slater, & Kelloway, 2000; Barbuto & Burbach, 2006; Harms & Crede, 2010), the results of the present study suggest that leaders' perceptions of their *social* skills may also be important. Focal leaders who rated themselves higher on the social expressivity, social control, and emotional sensitivity dimensions of social skill had higher levels of self-rated transformational leadership. This suggests that, in addition to recognizing and interpreting others' emotions – skills

associated with the emotional sensitivity dimension of social skill – leaders who are able to express themselves verbally (social expressivity) and appropriately control their verbal expressions (social control) are more likely to perceive themselves as transformational. This finding supports Riggio's (1986) distinction between social and emotional aspects of social skill, and reinforces Riggio and Reichard's (2008) contention that both aspects are important in the prediction of transformational leadership.

Overall, there is strong theory (e.g., Riggio & Reichard, 2008) to support the hypothesized relationships between the six dimensions of social skill and transformational leadership and some empirical evidence to suggest that further investigation into social skill as an antecedent of transformational leadership represents a productive avenue for future research. Drawing upon an interpersonal communication framework, Riggio and Reichard (2008) argued that the emotional components of social skill (i.e., emotional expressivity, emotional sensitivity, and emotional control) should help leaders to understand the needs and feelings of followers and better motivate and inspire followers, behaviors that are central to the individualized consideration and inspirational motivation components of transformational leadership. Similarly, the social components (i.e., social expressivity, social sensitivity, and social control) should help leaders to effectively listen to and coach/mentor others, inspire others through their words and actions, and manage the impression they make on others (Riggio & Reichard, 2008), behaviors associated with the idealized influence and intellectual stimulation dimensions of transformational leadership.

Prior studies (e.g., Groves, 2006; Riggio & Carney, 2003; Riggio et al., 2003) have empirically demonstrated several of these proposed relationships. For example,

emotional expressiveness has been found to be key component of charismatic leadership and is related to a leader's ability to inspire and motivate followers (e.g., Groves, 2006). Additionally, social expressiveness and social control have been found to be related to leader emergence and general effectiveness in social situations (Riggio & Carney, 2003; Riggio et al., 2003). Such findings combined with the results of the present study suggest that social skill should not be abandoned as a potential antecedent of transformational leadership without further investigation of this relationship.

Review of Part Two: Social Skill and Transformational Leadership Self-Awareness

In Part Two, I examined the way in which discrepancies between focal leader and direct report ratings of transformational leadership were related to focal leaders' social skill. Results of the polynomial regression analyses failed to support Hypothesis 11a, suggesting that social skill was not positively related to transformational leadership among focal leaders whose self- and direct report-ratings were in-agreement. Additionally, only the social sensitivity dimension of social skill was found to be significantly related to discrepancies in transformational leadership ratings. However, the direction of this relationship was the opposite of that which I predicted such that social sensitivity *increased* as focal leader and direct report transformational leadership ratings became increasingly discrepant. Therefore, Hypothesis 11b was not supported. The results of Part Two indicate that discrepancies indeed exist between focal leader and direct report ratings of transformational leadership, but suggest that social skill is not a significant factor affecting rating discrepancies.

As discussed previously, the non-significant results obtained in Part Two were likely attributable in part to the poor measure of social skill used in the present study.

Specifically, the observed relationships were likely attenuated by a lack of validity in the measurement of the social skill construct. Individual factors, such as focal leader gender and tenure (Ostroff et al., 2004), as well as contextual factors, such as the organizational culture, may have further confounded focal leader and direct report ratings of both social skill and transformational leadership and contributed to the observed discrepancies between focal leader and direct report ratings of transformational leadership.

Although largely non-significant, the results of Part Two suggest that self-other agreement should be considered in studies of the antecedents of transformational leadership. Several studies (e.g., Atwater, et al., 2005; Gentry et al., 2007; Sosik, 2001; Tekleab et al., 2008) have examined the way in which self-other agreement is related to performance outcomes. The results of these studies indicate that leaders whose self-ratings are aligned with other-ratings on a variety of perceptual variables (e.g., performance, derailment potential, transformational leadership) experience the most positive outcomes (e.g., follower satisfaction, commitment, trust in the leader, etc.). The present study extended this rationale to the examination of alignment on transformational leadership ratings. Specifically, social skill was examined as a factor that may be related to leaders' self-awareness (i.e., alignment between self- and other-ratings) of their transformational leadership abilities. To my knowledge, this was the first study to examine transformational leadership self-awareness using a polynomial regression and response surface analysis framework.

Consistent with prior studies (e.g., Church, 1997; Van Velsor et al., 1993), focal leaders' average self-ratings of transformational leadership (M = 4.08) were higher than direct reports' ratings of transformational leadership (M = 3.89). Additionally, 32.3

percent of the focal leaders over-estimated their transformational leadership ability relative to their direct reports, whereas 16.2 percent under-estimated their transformational leadership ability. These findings suggest that meaningful discrepancies exist between self- and other-ratings of transformational leadership. Although the results did not support the hypothesized relationships with the dimensions of social skill, the examination of self-other rating discrepancies represents an important methodological contribution to the study of transformational leadership and a promising avenue for future research.

Practical Implications

Given that the results of the present study generally failed to support the hypothesized relationships, it would be misleading to derive practical implications on the basis of this study alone. Instead, I have provided below several possible practical implications of this line of research. Additional empirical evidence is needed before the implications discussed below are generalized to the business environment.

The benefits of transformational leadership for managers, their employees, and organizations as a whole have long been recognized by researchers and practitioners (Bass & Avolio, 1994; Yukl, 2006). Formal training programs and leadership development activities are often implemented with the aim of teaching managers how to be more transformational (Yukl, 2006). Indeed, transformational leadership training has been found to improve subordinates' perceptions of their leaders' effectiveness, subordinates' own organizational commitment, and even financial performance of the organization (Barling, Weber, & Kelloway, 1996). If empirically supported, the results of the present line of research would provide preliminary evidence to suggest that social

skill training may help to augment existing leadership development curricula and strengthen individual and organizational outcomes. Specifically, training on the skills associated with emotional sensitivity, social expressivity, and social control may help managers to more effectively read/interpret the needs of their followers and tailor their expressions accordingly, thus enhancing their ability to engage in the dynamic, interpersonal behaviors associated with transformational leadership.

Additionally, if empirically supported, the results would reinforce the use of multi-rater/360-degree assessments as leadership development tools. This study corroborates previous findings (e.g., Atwater, et al., 1998; Atwater & Yammarino) showing that cross-source performance and leadership ratings are only modestly correlated, and suggests that such discrepancies reflect meaningful differences in perceptions across various constituents. The use of multi-rater assessments may thus enhance the overall reliability of performance feedback (Day, 2001) and afford managers an opportunity to identify discrepancies between their self-perceptions and those held by key organizational stakeholders. As argued by Day (2001), such feedback may be useful in helping managers to become more self-aware and even increase their interpersonal competence.

Limitations and Directions for Future Research

The results of the present study were affected by several notable measurement and design limitations. First, as discussed previously, construct validity issues with the shortened measure of social skill used in the present study likely contributed to the non-significant findings in both Part One and Part Two. Future research should focus on clarifying the social skill construct, and refining and validating a measure that accurately

captures the entirety of the construct space. As discussed previously, Riggio's (1986) six dimensions of social skill represent only one of many conceptualizations of this complex construct. Researchers have defined and operationalized a wide array of distinct but overlapping social skill constructs, including social competence (Schneider, Ackerman, & Kanfer, 1996), social intelligence (Marlowe, 1986), political skill (Ferris, Perrewe, & Douglas, 2002), and emotional intelligence (Salovey & Mayer, 1990). As noted by Ferris and colleagues (2002), most of these definitions share an emphasis on the ability to cognitively read and understand social situation and adjust one's behavior and emotions in response to dynamic social demands (Ferris, Perrewe, & Douglas, 2002).

It is possible that existing measures associated with these or other perspectives may have fared better as antecedents of transformational leadership. However, prior research suggests that there is significant overlap between many of the existing measures of social skill (Heggestad & Morrison, 2008). Before proceeding with an examination of social skill as an antecedent of transformational leadership, future research should thus focus on developing and validating a measure of social skill that synthesizes the many existing perspectives and accurately captures the critical components of this construct. Personality traits (e.g., extraversion, agreeableness) and their associated measures have frequently served as the basis for prior social skill measurement development efforts (e.g., Riggio, 1986). Future efforts to develop a measure of social skill research should instead utilize items from existing measures of social skill as a starting point. Specifically, researchers could consider content sorting items from existing measures and using this sorting process to synthesize the many existing measures of social skill and generate a new measure that more accurately captures the core dimensions of this

construct. Furthermore, during the measurement development process researchers could examine the way in which participants' frame of reference influences the measurement of social skill and affects corresponding relationships with workplace outcomes.

A second measurement limitation was the lack of variance on the focal study variables. The average standard deviation across focal leaders' ratings on the six social skill dimensions was only .64 on a one to five scale. Similarly, the standard deviations for focal leaders' and direct reports' ratings of transformational leadership were only .43 and .83, respectively. Although leaders in the study organization may have in fact been somewhat homogenous on the focal constructs, such low levels of variance suggest that response bias (i.e., central tendency) prevented respondents from using the entire range of the scale. Such truncated variance may have reduced the reliability and validity of the measures (Crocker & Algina, 1986) and attenuated the observed relationships (Hallahan & Rosenthal, 1996), thus contributing to the lack of support for the majority of the hypothesized relationships.

The retrospective manner in which the focal variables were measured represents another limitation of the present study. Transformational leadership, leader effectiveness, and trust in the leader were all measured by asking direct reports to indicate the frequency with which focal leaders' engaged in particular behaviors in the past. Performance appraisal research suggests that the cognitive storage process may distort behavioral frequency ratings such that they shift from specific behavioral observations to global behavioral inferences (Murphy & Cleveland, 1995; Nathan & Alexander, 1988). Specifically, when faced with difficulty recalling relevant past behaviors, people often defer to generalizations or "false" inferences based on information that is more readily

available when ratings are being made (DeNisi & Williams, 1988). Frequency ratings obtained from direct reports may thus have been biased by generalized behavioral inferences. Future research could employ diary methods, which have been found to aid in the recall of behavioral information and improve the accuracy of behavioral frequency ratings (DeNisi, Robbins, & Cafferty, 1989).

Additionally, common method variance may have influenced the observed relationships (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Specifically, the transformational leadership items, which were presented to direct reports early in the survey, may have primed responses to the latter leader effectiveness and trust in the leader items. Consistent with the recommendations of Podsakoff and colleagues (2003), several steps were taken in the design of the study to minimize the influence of common method bias. First, to encourage honesty, participants were assured first in the invitation email and again in the survey instructions that their responses to the survey would be kept strictly confidential. Unfortunately, constraints on the length of the survey prohibited the inclusion of additional items that may have helped to reduce common method variance by cognitively or temporally separating direct reports' ratings of transformational leadership from the outcome measures. Secondly, the hypothesized relationships between the dimensions of social skill and transformational leadership were tested using data from distinct data sources (focal leaders and direct reports). However, the hypothesized relationships between transformational leadership, leader effectiveness, and trust in the leader were initially tested using single source (direct report) ratings. Finally, statistical approaches were used post hoc to isolate the effects of common method bias. Specifically, confirmatory factor analysis was used to examine the distinctiveness of

leader effectiveness and trust in the leader measures, as rated by direct reports. Although several steps were taken to alleviate common method bias, the observed pattern of relationships suggests that it still had a notable effect on the results. Future research should utilize alternative sources, such as boss-ratings, and collect data over multiple measurement occasions to further reduce the effects of common method bias.

Another limitation of the present study was the lack of information available regarding the strength of the relationships between focal leaders and their direct reports. In the present study, the majority of managers (55.6 percent) had worked for the study organization for more than 16 years. Many of these managers likely rose to leadership positions through the employee ranks, forming relationships along the way with many individuals whom they later supervised. Such relationships may have influenced direct reports' ratings of their leader's behavior and effectiveness, likely making their ratings more positive (as indicated by the mean transformational leadership ratings), If such relationships had not existed, direct reports' ratings of their leader's transformational leadership behaviors and effectiveness may have been less positive and/or less highly correlated. Future research into the relationship between social skill and transformational leadership should consider the strength of the relationships/ties between leaders and their direct reports.

Finally, the current study was cross-sectional in nature, thus prohibiting inferences regarding the direction of causality and making it difficult to dismiss alternative explanations for the observed relationships. Theoretically, transformational leadership has been defined as an antecedent of workplace outcomes (e.g., follower satisfaction, trust in the leader; Avolio, Bass, & Jung, 1999; Bass, 1990a; Bass & Avolio,

1994); however, given the design of the present study it is impossible to rule out the possibility that global perceptions of leader effectiveness may instead contribute to perceptions of transformational leadership. Similarly, transformational leadership, which has typically been studied as an outcome of various personality traits and social skills (e.g., Atwater & Yammarino, 1993, Howell & Avolio, 1993; Atwater, Dionne, Camobreco, Avolio, & Lau, 1998), may actually itself lead to higher levels of social and emotional skill. Longitudinal studies are needed to investigate the directional nature of the hypothesized relationships and rule out such plausible alternative explanations.

Despite the many non-significant results, this study highlighted the need to continue investigating both social and emotional skills and their relationship with transformational leadership. Additionally, the results reinforced the importance of examining the effects of alignment between self- and other-ratings (i.e., self-awareness) in the transformational leadership literature. Given the robust relationships between self-awareness and leader effectiveness previously reported in the literature (Atwater & Yammarino, 1992), future research should continue to examine factors that enhance transformational leadership self-awareness. Overall, the results of this study suggest that both research and practice would benefit from additional investigation into the social skill construct and its relationship with both transformational leadership and transformational leadership self-awareness.

REFERENCES

Agle, B. R., Nagarajan, N. J., Sonnenfeld, J. A., & Srinivasan, D. (2006). Does CEO charisma matter? An empirical analysis of the relationships among organizational performance, environmental uncertainty, and top management team perceptions of CEO charisma. *Academy of Management Journal, 49,* 161-174.

Atwater, L. E., Dionne, S. D., Camobreco, J. F., Avolio, B. J., & Lau, A. (1998). Individual attributes and leadership style: Predicting the use of punishment and its effects. *Journal of Organizational Behavior, 19,* 559–576.

Atwater, L. E., Ostroff, C. Yammarino, F. J., & Fleenor, J. W. (1998). Self-other agreement: Does it really matter? *Personnel Psychology, 51,* 577-598.

Atwater, L. E., Waldman, D., Ostroff, C., Robie, C., & Johnson, K. M. (2005). Self-other agreement: Comparing its relationship with performance in the US and Europe. *International Journal of Selection and Assessment, 13,* 25-40.

Atwater, L. E., & Yammarino, F. J. (1992). Does self-other agreement on leadership perceptions moderate the validity of leadership and performance predictions? *Personnel Psychology, 45,* 141-164.

Atwater, L. E., & Yammarino, F. J. (1993). Personal attributes as predictors of superiors' and subordinates' perceptions of military academy leadership. *Human Relations, 46,* 645–668.

Atwater, L. E., & Yammarino, F. J. (1997). Self-other rating agreement: A review and model. *Research in Personnel and Human Resources Management,* 15, 121-174.

Avolio, B. J. (1994). The "natural": Some antecedents to transformational leadership. *International Journal of Public Administration, 17,* 1559-1581.

Avolio, B. J. (2007). Promoting more integrative strategies for leadership theory-building. *American Psychologist, 62,* 25-33.

Avolio, B. J., & Bass, B. M. (2002). *Manual for the Multifactor Leadership Questionnaire (Form 5X).* Redwood City, CA: Mindgarden.

Avolio, B. J., Bass, B. M., & Jung, D. (1999). Reexamining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology, 7,* 441–462.

Awamleh, R., & Gardner, W. L. (1999). Perceptions of leader charisma and effectiveness: The effects of vision content, delivery, and organizational performance. *The Leadership Quarterly, 10,* 345−373.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W.H. Freeman.

Barbuto, J. E., & Burbach, M. E. (2006). The emotional intelligence of transformational leaders: A field study of elected officials. *Journal of Social Psychology, 14,* 51-64.

Barling, J., Slater, F., & Kelloway, E. K. (2000). Transformational leadership and emotional intelligence: An exploratory study. *Leadership and Organization Development Journal, 21*(3), 157-161.

Bass, B. M. (1985). Leadership and Performance beyond Expectations. New York: Free Press.

Bass, B. M. (1990a). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics, 18*(3), 19-31.

Bass, B. M. (1990b). *Bass & Stogdill's handbook of leadership: Theory, research, and managerial applications* (3rd ed.). New York: The Free Press.

Bass, B. M. (1998). *Transformational leadership: Industrial, military, and educational impact.* Mahwah, NJ: Erlbaum.

Bass, B. M., & Avolio, B. J. (1993). Transformational leadership: A response to critiques. In M. M. Chemers & R. Ayman (Eds.), *Leadership theory and research: Perspectives and directions* (pp. 49-80). San Diego: Academic Press.

Bass, B. M., & Avolio, B. J. (1994). Improving organizational effectiveness through transformational leadership. Thousand Oaks, CA: Sage.

Bass, B. M., & Avolio, B. J. (1997). Full-range of leadership development: Manual for the Multifactor Leadership Questionnaire. Palo Alto, CA: Mind Garden.

Bentler, P. M. (1990). Fit indexes, Lagrange multipliers, constraint changes and incomplete data in structural models. *Multivariate Behavioral Research, 2,* 163-172.

Bommer, W. H., Rubin, R. S., & Baldwin, T. T. (2004). Setting the stage for effective leadership: Antecedents of transformational leadership behavior. *Leadership Quarterly, 15,* 195-210.

Browne, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fiIt. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equations models* (pp. 136–162). Newbury Park, CA: Sage.

Brown, M. E. & Trevino, L. K. (2006). Socialized charismatic leadership, values congruence, and deviance in work groups. *Journal of Applied Psychology, 91,* 954-962.

Brutus, S., Fleenor, J. W., & McCauley, C. D. (1999). Demographic and personality predictors of congruence in multi-source ratings. *Journal of Management Development, 18*, 417-435.

Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods.* Newbury Park, CA: Sage.

Buss, A. H. (1980). *Self-consciousness and social anxiety.* San Francisco: Freeman.

Bycio, P., Hackett, R. D., & Allen, J. W. (1995). Further assessments of the Bass (1985) conceptualization of transactional and transformational leadership. *Journal of Applied Psychology, 80,* 468-478.

Cattell, R. B., Eber, H. W., & Tatsuoka, M. M. (1970). *Handbook for the16* PF (4th ed.). Champaign, IL: Institute for Personality and Ability Testing.

Cherulnik, P.D., Donley, K.A., Wiewel, T.S.R. and Miller, S.R. (2001). Charisma is contagious: the effect of leaders' charisma on observers' affect, *Journal of Applied Social Psychology, 31,* 2149-2159.

Church, A. H. (1997). Managerial self-awareness in high performing individuals in organizations. *Journal of Applied Psychology, 82,* 281-292.

Conger, J. A., & Kanungo, R. (1987). Toward a behavioral theory of charismatic leadership in organizational settings. *Academy of Management Review, 12,* 637-647.

Crocker, L. & Algina, J. (1986). *Introduction to classical and modern test theory.* Orlando, FL: Harcourt Brace Jovanavich College Publishers.

Crowne, D. P., & Marlowe, D. (1964). *The approval motive.* New York: Wiley.

Day, D. V. (2001). Leadership development: A review in context. *Leadership Quarterly, 11*, 581-613.

Den Hartog, D. N., Van Muijen, J. J., & Koopman, P. L. (1997). Transactional versus transformational leadership: An analysis of the MLQ. *Journal of Occupational and Organizational Psychology, 70,* 19–34.

DeNisi, A. S., Robbins, R., & Cafferty, T. P. (1989). Organization of information used for performance appraisals: Role of diary keeping. *Journal of Applied Psychology, 74,* 124-129.

DeNisi, A. S., & Williams, K. J. (1988). Cognitive approaches to performance appraisal. In G. Ferris & K. Rowland (Eds), *Research in personnel and human resource management (Vol. 6).* Greenwich, CT: JAI Press.

Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology, 87,* 611-628.

Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin, 108,* 233-256.

Edwards, J. R. (2002). Alternatives to difference scores: Polynomial regression analysis and response surface methodology. In F. Drasgow & N. W. Schmitt (Eds.), *Advance in measurement and data analysis* (p. 350 – 400). San Francisco: Jossey-Bass.

Edwards, J. R. (2001). Ten difference score myths. *Organizational Research Methods, 4,* 265-287.

Edwards, J. R. & Parry, M. E. (1993). On the use of polynomial regression equations as an alternative to difference scores in organizational research. *Academy of Management Journal, 36,* 1577-1613.

Ferris, G. R., Perrewe, P. L., & Douglas, C. (2002). Social effectiveness in organizations: Construct validity and research directions. *Journal of Leadership & Organizational Studies, 9,* 49-63.

Fleenor, J. W., McCauley, C. D., & Brutus, S. (1996). Self-other rating agreement and leader effectiveness. *Leadership Quarterly, 7*, 487–506.

Gentry, W. A., Hannum, K. M., Ekelund, B. Z., & de Jong, A. (2007). A study of the discrepancy between self- and observer-ratings on managerial derailment characteristics of European managers. *European Journal of Work and Organizational Psychology, 16,* 295-325.

George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations, 53,* 1027-1056.

Goleman, D. Boyatzis, R. E., & McKee, A. (2002). *Primal Leadership: Realizing the power of emotional intelligence.* Harvard Business School Publishing, Boston, MA.

Groves, K.S. (2005). Gender differences in social and emotional skills and charismatic leadership. *Journal of Leadership and Organization Studies, 11,* 30-47.

Groves, K.S. (2006), Leader emotional expressivity, visionary leadership, and organizational change, *Leadership & Organization Development Journal, 27,* 566-583.

Hallahan. M., & Rosenthal, R. (1996). Statistical power: Concepts, procedures, and applications. *Behaviour, Research, and Therapy, 34*(5-6), 489-499.

Harms, P. D., & Crede, M. (2010). Emotional intelligence and transformational and transactional leadership: A meta-analysis. *Journal of Leadership and Organizational Studies, 17,* 5-17.

Harris, M. M., & Schaubroeck, J. (1998). A meta-analysis of self-supervisor, self-peer, and peer-supervisor ratings. *Personnel Psychology, 41,* 43-61.

Heggestad, E. D. & Morrison, M. (2008). Defining the social effectiveness construct space: A step forward. *Journal of Personality, 76,* 839-874.

Herold, D. M., Fedor, D. B., Caldwell, S., & Liu, Y. (2008). The effects of transformational and change leadership on employees' commitment to change: A multilevel study. *Journal of Applied Psychology, 93,* 346-357.

Hofmann, D.A. (1997). An overview of the logic and rationale of hierarchical linear models. *Journal of Management, 23,* 723-744.

Hofmann, D. A., & Gavin, M. B. (1998). Centering decisions in Hierarchical Linear Models: Theoretical and methodological implications for organizational science. *Journal of Management, 23,* 723-744.

Hofmann, D. A., Morgeson, F. P., & Gerras, S. J. (2003). Climate as a moderator of the relationship between leader-member exchange and content specific citizenship: Safety climate as an exemplar. *Journal of Applied Psychology, 88,* 170-178.

Howell, J., & Avolio, B. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology, 78,* 891–902.

Howell, J. M., & Hall-Merenda, K. E. (1999). The ties that bind: The impact of leader-member exchange, transformational and transactional leadership, and distance on follower performance. *Journal of Applied Psychology, 84,* 680-694.

Jöreskog, K. G., & Sörbom, D. (2007). LISREL (Version 8.80) [Computer software]. Lincolnwood, IL: Scientific Software International.

Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology, 89,* 755–768.

Jung, D., & Sosik, J. (2002). Transformational leadership in work groups: The role of empowerment, cohesiveness, and collective efficacy on perceived group performance. *Small Group Research, 33,* 313-336.

Jung, D., Wu, A., & Chow, C. W. (2008). Towards understanding the direct and indirect effects of CEOs' transformational leadership on firm innovation. *The Leadership Quarterly, 19,* 582-594.

Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 233-265). New York: McGraw Hill.

Kirkpatrick, S. A. & Locke, E. A (1996). Direct and indirect effects of three core charismatic leadership components on performance and attitudes. *Journal of Applied Psychology, 81,* 36-51.

Komives, S. R., Lucas, N., & McMahon, T. R. (1998). *Exploring leadership: For college students who want to make a difference.* San Francisco: Jossey-Bass.

Kupers, W., & Weibler, J. (2006). How emotional is transformational leadership really? *Leadership and Organization Development Journal, 27,* 368-383.

LeBreton, J. M., & Senter, J. L. (2007). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, *11,* 815 – 852.

Ling, Y., Simsek, Z., Lubatkin, M. H., & Veiga, J. F. (2008). The impact of transformational CEOs on the performance of small- to medium-sized firms: Does organizational context matter? *Journal of Applied Psychology, 93,* 923-934.

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,* 385-425.

Mabe, P.A., & West, S. G. (1982). Validity of self-evaluation of ability: A review and meta-analysis. *Journal of Applied Psychology, 67,* 375-389.

MacCann, C., & Roberts, R. D. (2008). New paradigms for assessing emotional intelligence: Theory and data. *Emotion, 8,* 540-551.

MacKenzie, S., Podsakoff, P., & Rich, G. (2000). Transformational and transactional leadership and salesperson performance. *Journal of the Academy of Marketing Science, 29,* 115-134.

Marlowe, H. A. (1986). Social intelligence: Evidence for multidimensionality and construct independence. *Journal of Educational Psychology, 78,* 52-58.

Mayer, J. D., Roberts, R. D., & Barsade, S. G. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology, 59,* 507-536.

Mayer, J. D., & Salovey, P. (2004). Social Intelligence [Emotional Intelligence, Personal Intelligence]. In C. Peterson & M. E. P. Seligman (Eds.), *Character strengths and virtues* (pp. 337-353). Washington, DC: American Psychological Association.

Mayer, J. D., Salovey, P, & Caruso, D. R. (2004). Emotional intelligence: Theory, Findings, and Implications. *Psychological Inquiry, 15*, 197-215.

Mintzberg, H. (1983). *Power in and around organizations*. Englewood Cliffs, NJ: Prentice-Hall.

Murphy, K. R., & Cleveland, J. N. (1995). *Understanding performance appraisal: Social, organizational, and goal-based perspectives*. Thousand Oaks, CA: Sage Publications.

Nathan, B. R., & Alexander, R. A. (1988). A comparison of criteria for test validation: A meta-analytic investigation. *Personnel Psychology, 41,* 827-837.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Ostroff, C., Atwater, L. E., & Feinberg, B. J. (2004). Understanding self-other agreement: a look at rater and rate characteristics, context, and outcomes. *Personnel Psychology, 57,* 333-375.

Peterson, S. J., Walumbwa, F. O., Byron, K., & Myrowitz, J. (2009). CEO positive psychological traits, transformational leadership, and firm performance in high-technology start-up and established firms. *Journal of Management, 35,* 348-368.

Podsakoff, P. M., MacKenzie, S. B., & Bommer, W. H. (1996). Transformational leader behaviors and substitutes for leadership as determinants of employee satisfaction, commitment, trust, and organizational citizenship behaviors. *Journal of Management, 22,* 259-298.

Podsakoff, P. M., MacKenzie, S. B., Lee, J-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88,* 879-903.

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,* 107-142.

Riggio, R. E. (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology, 51,* 649-660.

Riggio, R.E. and Carney, D.C. (2003), *Manual for the Social Skills Inventory* (2nd ed.), Mind Garden, Mountain View, CA.

Riggio, R. E., & Reichard, R. J. (2008). The emotional and social intelligences of effective leadership: An emotional and social skill approach. *Journal of Managerial Psychology, 23,* 169-185.

Riggio, R.E., Riggio, H.R., Salinas, C. and Cole, E.J. (2003). The role of social and emotional communication skills in leader emergence and effectiveness. *Group Dynamics: Theory, Research, and Practice, 7,* 83-103.

Rubin, R. S., Munz, D. C., & Bommer, W. H. (2005). Leading from within: The effects of emotion recognition and personality on transformational leadership behavior. *Academy of Management Journal, 48,* 845-858.

Sala, F. (2003). Executive blind spots: Discrepancies between self- and other-ratings. Consulting Psychology Journal, 55, 222-229.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9,* 185-211.

Schaubroeck, J., Lam, S. S. K., & Cha, S. E. (2007). Embracing transformational leadership: Team values and the impact of leader behavior on team performance. *Journal of Applied Psychology, 92,* 1020-1030.

Schippers, M. C., Den Hartog, D. N., Koopman, P. L., & van Knippenberg, D. (2008). The role of transformational leadership in enhancing team reflexivity. *Human Relations, 61,* 1593-1616.

Schmit, M. J., Ryan, A. M., Stierwalt, S. L. & Powell, A. B. (1995) Frame-of-reference effects on personality scale scores and criterion-related validity. *Journal of Applied Psychology, 80,* 607-620.

Schneider, R. J., Ackerman, P. L., & Kanfer, R. (1996). To "act wisely in human relations:" Exploring the dimensions of social competence. *Personality and Individual Differences, 21,* 469-481.

Schneider, R. J., Roberts, R. D., & Heggestad, E. D. (2002). Exploring the structure and construct validity of a self-report Social Competence Inventory. In L. M. Hough (Chair), *Compound traits: The next frontier of I/O personality research.* Symposium conducted at the 17th Annual Conference of the Society of Industrial and Organizational Psychology, Inc., Toronto, Ontario, Canada.

Seltzer, J., & Bass, B. M. (1990). Transformational leadership: Beyond initiation and consideration. *Journal of Management, 16,* 693-703.

Shanock, L. R., Baran, B. E., Gentry, W. A., Pattison, S. C., & Heggestad, E. D. (2010). Polynomial regression with response surface analysis: A powerful approach for examining moderation and overcoming limitations of difference scores. *Journal of Business and Psychology, 25,* 543-554.

Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports, 51,* 663-671.

Shrauger, J. S., & Schoeneman, T. J. (1979). Symbolic interactionist view of self-concept: Through the looking glass darkly. *Psychological Bulletin, 86,* 549-573.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology, 30,* 526.527.

Sosik, J. S. (2001). Self-other agreement on charismatic leadership: Relationships with work attitudes and managerial performance. *Group and Organization Management, 26,* 484-511.

Sosik, J. J., & Megerian, L. E. (1999). Understanding leader emotional intelligence and performance: The role of self-other agreement on transformational leadership perceptions. *Group Organization Management, 24,* 367-390.

Tabachnick, B. G., and Fidell, L. S. (2006). *Using Multivariate Statistics (5th ed.).* Boston: Allyn and Bacon.

Tanaka, J.S., & Huba, G. J. (1989). A general coefficient of determination for covariance structure models under arbitrary GLS estimation. *British Journal of Mathematical and Statistical Psychology, 42,* 233-239.

Tekleab, A. G., Sims, H. P., Yun, S., Tesluk, P. E., & Cox, J. (2008). Are we on the same page? Effects of self-awareness of empowering and transformational leadership. *Journal of Leadership and Organizational Studies, 14,* 185-201.

Tosi, H. L., Misangyi, V. F., Fanelli, A., Waldman, D. A., & Yammarino, F. J. (2004). CEO charisma, compensation, and firm performance. *The Leadership Quarterly, 15,* 405-420.

Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38,* 1–10.

Van Velsor, E., Taylor, S., & Leslie, J. B. (1993). An examination of the relationships among self-perception accuracy, self-awareness, gender, and leader effectiveness. *Human Resource Management*,*32*(2&3), 249-264.

Vecchio, R. P., & Anderson, R. J. (2009). Agreement in self-other ratings of leader effectiveness: The role of demographics and personality. *International Journal of Selection and Assessment, 17* (2), 165-179.

Waldman, D. A., Ramirez, G. G., House, R. J., & Puranam, P. (2001). Does leadership matter? CEO leadership attributes and profitability under conditions of perceived environmental uncertainty. *Academy of Management Journal, 44,* 134-143.

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,* 827-832.

Wegner, D., & Vallacher, R. (1980). *The self in social psychology.* New York: Oxford University Press.

Wicklund, R. (1975). Objective self-awareness. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 8, pp. 233-275). New York: Academic Press.

Wicklund, R. (1979). The influence of self on human behavior. *American Scientist, 67,* 187-193.

Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly, 13,* 243–274.

Yammarino, F. J., & Atwater, L. E. (1997). Do managers see themselves as others see them? Implications of self-other rating agreement for human resources management. *Organizational Dynamics*, 25, 35-44.

Yukl, G. A. (2006). *Leadership in organizations* (6th ed.). Englewood Cliffs, NJ: Prentice Hall.

Yukl, G. A. (1994). *Leadership in organizations* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

Zaccaro, S. J. (2007). Trait-based perspectives of leadership. *American Psychologist, 62,* 6-16.

Zhu, W., Chew, I. K. H., & Spangler, W. D. (2005). CEO transformational leadership and organizational outcomes: The mediating role of human-capital-enhancing human resource management. *The Leadership Quarterly, 16,* 39-52.

TABLE 1.

Study Measures and Sample Items

	Direct Report Measures	Focal Leader Measures
Antecedent (IV)		**Social Skills** *"I usually take the initiative and introduce myself to strangers."* *"When in discussions, I find myself doing a large share of the talking."*
Mediator	**Transformational Leadership Behaviors** *"I am ready to trust my manager to overcome any obstacle" (Idealized Influence)* *"In my mind, my manager is a symbol of success and accomplishment." (Inspirational Motivation)* *"My manager shows how to look at problems from new angles." (Intellectual Stimulation)* *"My manager treats me as an individual rather than just a member of the group." (Individualized Consideration)*	**Transformational Leadership Behaviors** *"I am ready to trust myself to overcome any obstacle" (Idealized Influence)* *"In my direct reports' minds, I am a symbol of success and accomplishment." (Inspirational Motivation)* *"I show my direct reports how to look at problems from new angles." (Intellectual Stimulation)* *"I treat my direct reports as an individual rather than just a member of the group." (Individualized Consideration)*
Outcomes (DV's)	**Leader Effectiveness, Extra Effort, and Satisfaction** *"My leader gets me to do more than I expected to do."* *"My leader increases my willingness to try harder."* **Trust in the Leader/Loyalty to the Leader** *"I feel quite confident that my leader will always try to treat me fairly."* *"I feel a strong sense of loyalty toward my leader."*	**Leader Effectiveness, Extra Effort, and Satisfaction** *"I get others to do more than they expected to do."* *"I increase others' willingness to try harder."*
Control Variables	**Demographic Information** Organizational Tenure Tenure with Focal Leader	**Emotional Intelligence** *"I have a good understanding of my own emotions."* *"I am a good observer of others' emotions."* *"I am a self-motivating person."* *I have good control of my own emotions."* **Demographic Information** Gender Hierarchical Level Organizational Tenure Number of Direct Reports

TABLE 2.

Confirmatory Factor Analysis of the Shortened Social Skill Inventory

Model	CFI	TLI	GFI	AGFI	χ^2	*df*	Difference	RMSEA
One factor	.61	.59	.49	.44	2012.55*	740		.14
Two factor[a]	.68	.65	.54	.49	1825.46*	739		.12
Three factor[b]	.70	.64	.54	.49	1849.86*	737		.12
Six Factor[c]	.80	.74	.61	.56	1528.10*	725		.09
Eight Factor[d]	.83	.81	.70	.62	1464.14*	714	548.41*	.07

Note. N = 124. The one-factor model includes Social Expressivity (SE), Social Sensitivity (SS), Social Control (SC), Emotional Expressivity (EE), Emotional Sensitivity (ES), and Emotional Control (EC). [a]The two-factor model treats Social (SS, SE, and SC) and Emotional (ES, EE, and EC) as distinct constructs. [b]The three-factor model treats Expressiveness (SE and EE), Sensitivity (SS and ES), and Control (SC and EC) as distinct constructs. [c]The six-factor model treats SE, SS, SC, EE, ES and EC as distinct constructs. [d] The eight factor model treats SE, SS, SC, EE, ES and EC as distinct constructs and includes Social and Emotional as higher order factors. SCFI = comparative fit index; TLI = Tucker-Lewis index; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; Difference = difference in chi-square between one factor and eight factor models; RMSEA = root-mean-square error of approximation. * $p < .01$.

TABLE 3.

Confirmatory Factor Analysis of Leader Effectiveness and Trust in the Leader

Model	CFI	TLI	GFI	AGFI	χ^2	*df*	Difference	RMSEA
One factor	.94	.93	.70	.59	774.02*	77		.20
Two factor[a]	.98	.97	.85	.80	367.68*	76	406.34*	.10

Note. $N = 346$. The one-factor model includes leader effectiveness and trust in the leader. [a]The two-factor model treats leader effectiveness and trust in the leader as distinct constructs. CFI = comparative fit index; TLI = Tucker-Lewis index; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; Difference = difference in chi-square from the previous model; RMSEA = root-mean-square error of approximation. * $p < .01$.

TABLE 4.

Part 1: Means, Standard Deviations, and Intercorrelations among Study Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. M TL	4.10	.43	.90																				
2. M SC	3.80	.66	.35*	.76																			
3. M SE	2.50	.74	.42*	.51*	.84																		
4. M SS	2.72	.62	.06	-.28*	.14*	.75																	
5. M EC	2.52	.53	.14*	-.01	.25*	.10	.50																
6. M EE	3.06	.67	.04	.30*	.00	-.07	-.32*	.50															
7. M ES	3.03	.62	.26*	.04	.30*	.13*	.33*	-.14*	.71														
8. M Eff	4.12	.48	.77*	.26*	.32*	.08	.14*	-.02	.21*	.87													
9. S TL	3.89	.83	.11*	.01	.01	.01	-.09	-.03	.1	.15*	.97												
10. S Eff	3.99	.86	.02	-.03	-.01	.03	-.08	-.06	.03	.08	.89*	.95											
11. S Trust	6.26	.91	-.04	-.04	-.06	-.02	-.05	-.09	.01	-.01	.73*	.75*	.90										
12. S Mgr	2.73	1.63	.08	-.01	-.05	-.07	.08	.04	-.13*	.1	-.04	-.05	-.02	-									
13. S Ten	3.77	1.25	.10	.06	.08	.11*	.00	-.04	.04	.08	.00	.03	-.06	.29*	-								
14. M Ten	4.21	1.06	.10	-.04	.02	.22*	.10	.03	.03	.05	-.01	.02	.00	.31*	.42*	-							
15. M Sex	1.24	.45	-.10	-.07	-.20*	-.05	-.25*	.23*	-.05	-.09	-.03	.00	.00	-.13*	-.23*	-.19*	-						
16. M Lev	1.43	.51	-.13*	.24*	.02	-.07	-.22*	.09	.06	-.20*	.11*	.09	.15*	-.16*	-.06	-.02	.19*	-					
17. M DRs	2.40	1.15	.15*	-.05	.10	.12*	.27*	-.08	.13*	.20*	.05	.07	-.03	.17*	.13*	.16*	-.12*	-.33*	-				
18. M SEA	5.92	.87	.28*	.26*	.30*	.01	.24*	.15*	.23*	.26*	.04	.01	.01	.02	-.02	.22*	.13*	.22*	.09	.91			
19. M OEA	5.53	.82	.33*	.21*	.30*	.11*	.16*	.09	.44*	.31*	.09	.01	.04	-.03	.03	.16*	.25*	.11*	.25*	.63*	.88		
20. M UOE	6.03	.88	.43*	.39*	.40*	.04	.25*	.12*	.23*	.43*	.04	-.02	-.02	-.02	-.03	.19*	.13*	.15*	.17*	.70*	.59*	.88	
21. M ROE	5.91	1.06	.39*	.14*	.24*	.01	.37*	-.14*	.26*	.31*	-.03	-.09	-.05	.06	-.03	.22*	.12*	-.01	.17*	.68*	.58*	.72*	.92

Note. *N*=346; Social Skill Subscales and all other variables were computed using *N*=346, subscale scores for individual focal leaders were assigned down to their direct reports. Therefore, the effective *N* for each of the social skill subscales is 124. Internal consistency reliabilities appear along the diagonal. 'M' is used to denote Focal Leader self-ratings; S is used to denote direct report ratings. TL = Transformational Leadership; SE = Social Expressivity; SS = Social Sensitivity; SC = Social Control; EC = Emotional Expressivity; ES = Emotional Sensitivity; EC = Emotional Control; Eff = Perceptions of Leader Effectiveness; Trust = Trust in the leader; S Mgr = Years Reporting to Focal Leader (1 = Less than 1 year; 2 = 1-2 years; 3 = 3-4 years; 4 = 5-6 years; 5 = 7-8 years; 6 = More than 8 years); Ten = Tenure (1 = Less than 1 year; 2 = 1-5 years; 3 = 6-10 years; 4 = 11-16 years; 5 = More than 16 years); Lev = Organizational Level (1=First-Line Supervision; 2 = Director and Above); DRs = Number of Direct Reports (1 = 1-5; 2 = 6-10; 3 = 11-15 years; 4 = 16-20 years; 5 = More than 21); M Sex (1=Male, 2=Female); SEA = Self-Emotions Appraisal; OEA = Other Emotions Appraisal; UOE = Use of Emotions to Facilitate Performance; ROE = Regulation of Emotion;*$p <$ .05.

TABLE 5.

Confirmatory Factor Analysis of Direct Report Ratings of Transformational Leadership, Leader Effectiveness, and Trust in the Leader

Model	CFI	TLI	GFI	AGFI	χ^2	*df*	Difference	RMSEA
One factor	.97	.97	.60	.56	2572.17*	527		.14
Two factor[a]	.97	.97	.63	.58	2379.32*	526	192.85*	.12
Three factor[b]	.97	.98	.69	.65	1964.91*	524	607.26*	.10

Note. N = 346. The one-factor model includes transformational leadership, leader effectiveness, and trust in the leader. [a]The two factor model is comprised of transformational leadership (Factor 1) and leader effectiveness/trust in the leader (Factor 2), [b]The three-factor model is comprised of transformational leadership (Factor 2), leader effectiveness (Factor 2) and trust in the leader (Factor 3). CFI = comparative fit index; TLI = Tucker-Lewis index; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; Difference = difference in chi-square from the one factor model; RMSEA = root-mean-square error of approximation. * $p < .01$.

TABLE 6.

Part 1: Hierarchical Linear Modeling Results for Social Skill Dimensions as Related to Perceptions of Leader Effectiveness and Trust in the Leader

Model	Coefficient				Variance Components		
	γ_{00}	γ_{01}	γ_{02}	γ_{10}	σ^2	τ_{00}	τ_{11}
Model 1 (H1): Transformational Leadership with Perceptions of Leader Effectiveness L1: $SEff_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + U_0$	3.99** (SE=.03)			.89** (SE=.02)	.15	.02**	
Model 2 (H2): Transformational Leadership with Trust in the Leader L1: $STrust_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + U_0$	6.27** (SE=.04)			.78** (SE=.04)	.37	.02	
Model 3 (H3): Social Sensitivity with Transformational Leadership L1: $STL_{IJ\,ij} = \beta_{0j} + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(SS_j) + U_0$	3.44** (SE=.31)	.21 (SE=.11)	.01 (SE=.01)		.55	.13**	
Model 4 (H4): Emotional Sensitivity with Transformational Leadership L1: $STL_{IJ\,ij} = \beta_{0j} + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(ES_j) + U_0$	3.43** (SE=.35)	.20 (SE=.11)	.01 (SE=.01)		.55	.13**	
Model 5 (H5): Social Expressivity with Transformational Leadership L1: $STL_{IJ\,ij} = \beta_{0j} + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(SE_j) + U_0$	3.54** (SE=.24)	.20 (SE=.11)	.00 (SE=.01)		.55	.13**	

Model	Coefficient				Variance Components		
	γ_{00}	γ_{01}	γ_{02}	γ_{10}	σ^2	τ_{00}	τ_{11}
Model 6 (H6): Emotional Expressivity with Transformational Leadership L1: $STL_{IJ\,ij} = \beta_{0j} + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(EE_j) + U_0$	3.61** (SE=.30)	.20 (SE=.11)	-.01 (SE=.31)		.55	.13**	
Model 7 (H7): Social Control with Transformational Leadership L1: $STL_{IJ\,ij} = \beta_{0j} + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_{ij}) + \gamma_{02}(SC_{ij}) + U_0$	3.71** (SE=.33)	.21 (SE=.11)	-.01 (SE=.24)		.55	.13**	
Model 8 (H8): Emotional Control with Transformational Leadership L1: $STL_{IJ\,j} = \beta_{0j} + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(EC_j) + U_0$	3.78** (SE=.35)	.18 (SE=.11)	-.01 (SE=.02)		.55	.13**	
Model 9 (H9a): Social Expressivity, Transformational Leadership & Leader Effectiveness L1: $SEff_{ij} = \beta_{0j} + \beta_{1j}(STL_{IJ}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(SE_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	4.10** (SE=.94)	-.01 (SE=.04)	-.01 (SE=.01)	.89** (SE=.04)	.11	.03**	.06**
Model 10 (H9b): Emotional Expressivity, Transformational Leadership & Leader Effectiveness L1: $SEff_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(EE_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	4.11** (SE=.12)	.00 (SE=.04)	-.01 (SE=.01)	.89** (SE=.04)	.11	.03**	.06**

Model	Coefficient				Variance Components		
	γ_{00}	γ_{01}	γ_{02}	γ_{10}	σ^2	τ_{00}	τ_{11}
Model 11 (H9c): Social Sensitivity, Transformational Leadership & Leader Effectiveness L1: $SEff_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(SS_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	3.93** (SE=.13)	.00 (SE=.34)	.00 (SE=.00)	.89** (SE=.04)	.11	.03**	.06**
Model 12 (H9d): Emotional Sensitivity, Transformational Leadership & Leader Effectiveness L1: $SEff_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(ES_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	4.24** (SE=.12)	-.01 (SE=.04)	-.01 (SE=.14)	.89** (SE=.04)	.11	.03**	.06**
Model 13 (H9e): Social Control, Transformational Leadership & Leader Effectiveness L1: $SEff_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(SC_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	4.21** (SE=.13)	.02 (SE=.05)	-.01 (SE=.01)	.89** (SE=.04)	.11	.03**	.06**
Model 14 (H9f): Emotional Control, Transformational Leadership & Leader Effectiveness L1: $SEff_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(EC_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	4.04** (SE=.15)	-.01 (SE=..04)	-.01 (SE=.01)	.89** (SE=.04)	.11	.03**	.06**
Model 15 (H10a): Social Expressivity, Transformational Leadership & Trust L1: $STrust_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(SE_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	6.25** (SE=.16)	.10 (SE=.06)	-.01 (SE=.01)	.70** (SE=.01)	.26	.06*	.13**

Model	Coefficient				Variance Components		
	γ_{00}	γ_{01}	γ_{02}	γ_{10}	σ^2	τ_{00}	τ_{11}
Model 16 (H10b): Emotional Expressivity, Transformational Leadership & Trust L1: $STrust_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(EE_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	6.33** (SE=.18)	.10 (SE=.07)	-.01 (SE=.01)	.70** (SE=.01)	.26	.06*	.13**
Model 17 (H10c): Social Sensitivity, Transformational Leadership & Trust L1: $STrust_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(SS_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	6.22** (SE=.19)	.10 (SE=.07)	-.01 (SE=.01)	.70** (SE=.01)	.26	.06*	.13**
Model 18 (H10d): Emotional Sensitivity, Transformational Leadership & Trust L1: $STrust_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(ES_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	6.42** (SE=.19)	.10 (SE=.07)	-.01 (SE=.01)	.70** (SE=.01)	.26	.06*	.13**
Model 19 (H10e): Social Control, Transformational Leadership & Trust L1: $STrust_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(SC_j) + U_0$	6.33** (SE=.20)	.12 (SE=.07)	-.01 (SE=.01)	.70** (SE=.01)	.26	.06*	.13**
Model 19 (H10f): Emotional Control, Transformational Leadership & Trust L1: $STrust_{ij} = \beta_{0j} + \beta_{1j}(STL_{ij}{}^{a}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(level_j) + \gamma_{02}(EC_j) + U_0$ L2: $\beta_{1j} = \gamma_{10} + U_1$	6.18** (SE=.23)	.10 (SE=.07)	-.00 (SE=.01)	.70** (SE=.01)	.26	.06*	.13**

Note. Level 1 N = 346; Level 2 N = 124; L1 = Level 1; L2 = level 2; SEFF = Direct Report Ratings of Leader Effectiveness; STrust = Direct Report Ratings of Trust in the Leader; STL = Direct Report Ratings of Transformational Leadership; SE = Social Expressivity; SS = Social Sensitivity; SC = Social Control; EC = Emotional Expressivity; ES = Emotional Sensitivity; EC = Emotional Control (Focal Leader Ratings);

Level = Focal Leader's Organizational Level (1=First-Line Supervision; 2 = Director and Above); γ_{00} = Intercept of the Level 2 regression predicting β_{0j}; γ_{01} to γ_{02} = Slopes of Level 2 regression predicting β_{0j}; γ_{10} = Intercept of Level 2 regression predicting β_{1j}; σ^2 = Variance in Level 1 residual (i.e., variance in r_y); τ_{00} = Variance in Level 2 residual for models predicting β_{0j} (i.e., variance in U_0); τ_{11} = Variance in Level 2 residual for models predicting β_{ij} (i.e., variance in U_1). The test of significance for the variance components is distributed as chi-square.

[a] In the Level 1 analyses, STL was grand mean centered.

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

TABLE 7.

Supplemental HLM Analyses Using Manager Ratings of Transformational Leadership

Model	Coefficient			Variance Components	
	γ_{00}	γ_{01}	γ_{02}	σ^2	τ_{00}
Model 1: Transformational Leadership with Perceptions of Leader Effectiveness L1: $SEff_{ij} = \beta_{0j} + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(Level_j) + \gamma_{02}(MTL_j) + U_0$	3.52** (SE=.60)	.18 (SE=.11)	.01 (SE=.01)	.55	.17**
Model 2: Transformational Leadership with Trust in the Leader L1: $STRUST_{ij} = \beta_{0j} + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + \gamma_{01}(Level_j) + \gamma_{02}(MTL_j) + U_0$	6.08** (SE=.59)	.27 (SE=.11)	-.01 (SE=.01)	.69	.12**

Note. Level 1 N = 346; Level 2 N = 124; L1 = Level 1; L2 = level 2; SEFF = Direct Report Ratings of Leader Effectiveness; STrust = Direct Report Ratings of Trust in the Leader; MTL = Focal Leader Ratings of Transformational Leadership; Level = Focal Leader's Organizational Level (1=First-Line Supervision; 2 = Director and Above); γ_{00} = Intercept of the Level 2 regression predicting β_{0j}; γ_{01} to γ_{02} = Slopes of Level 2 regression predicting β_{0j}; τ_{00} = Variance in Level 2 residual for models predicting β_{0j} (i.e., variance in U_0); σ^2 = Variance in Level 1 residual (i.e., variance in r_y). The test of significance for the variance components is distributed as chi-square.

[a] In the Level 1 analyses, MTL was grand mean centered. *$p < .05$. ** $p < .01$.

TABLE 8.

Hierarchical Regression of Transformational Leadership on Social Skill Dimensions

Model		*b*	S.E.	R^2	ΔR^2
1				0.03	0.03
	(Intercept)	3.99**	0.17		
	Level	-0.03	0.08		
	Direct Reports	0.06	0.04		
2a				0.03	0.00
	(Intercept)	4.01**	0.25		
	Level	-0.03	0.08		
	Direct Reports	0.06	0.04		
	Social Sensitivity	-0.01	0.06		
2b				0.10	0.07
	(Intercept)	3.45**	0.24		
	Level	-0.01	0.08		
	Direct Reports	0.05	0.03		
	Emotional Sensitivity	0.18**	0.06		
2c				0.16	0.13
	(Intercept)	3.55**	0.19		
	Level	-0.04	0.08		
	Direct Reports	0.04	0.03		
	Social Expressivity	0.20**	0.05		
2d				0.03	0.00
	(Intercept)	3.91**	0.26		
	Level	-0.02	0.08		
	Direct Reports	0.06	0.04		
	Emotional Expressivity	0.02	0.06		
2e				0.16	0.13
	(Intercept)	3.21**	0.25		
	Level	-0.10	0.08		
	Direct Reports	0.05	0.03		
	Social Control	0.24**	0.06		
2f				0.04	0.01
	(Intercept)	3.82**	0.25		
	Level	-0.01	0.08		
	Direct Reports	0.05	0.04		
	Emotional Control	0.07	0.07		

Note. N = 124. *b* = unstandardized beta weight; DV = Focal Leader Ratings of Transformational Leadership {0 to 5}. Level = Focal Leader's Organizational Level (1=First-Line Supervision; 2 = Director and Above); Direct Reports = Number of Direct Reports (1 = 1-5; 2 = 6-10; 3 = 11-15 years; 4 = 16-20 years; 5 = More than 21); ** p<.001,

TABLE 9.

Hierarchical Regression of Transformational Leadership on Social and Emotional Dimensions of Social Skill

Model		*b*	S.E.	R^2	ΔR^2
1				0.03	0.03
	(Intercept)	3.99*	0.17		
	Level	-0.03	0.08		
	Direct Reports	0.06	0.04		
2a				0.17	0.14
	(Intercept)	3.00*	0.28		
	Level	-0.06	0.08		
	Direct Reports	0.04	0.03		
	Social	0.40*	0.08		
2b				0.09	0.06
	(Intercept)	3.07*	0.37		
	Level	0.01	0.08		
	Direct Reports	0.05	0.03		
	Emotional	0.31*	0.11		

Note. $N = 124$. *b* = unstandardized beta weight; Social = Average of Focal Leader ratings on the SC, SS, and SE dimensions of Social Skill; Emotional = Average of Focal Leader ratings on the EC, ES, and EE dimensions of Social Skill; DV = Focal Leader Ratings of Transformational Leadership {0 to 5}; Level = Focal Leader's Organizational Level (1=First-Line Supervision; 2 = Director and Above); Direct Reports = Number of Direct Reports (1 = 1-5; 2 = 6-10; 3 = 11-15 years; 4 = 16-20 years; 5 = More than 21); * $p<.001$,

Table 10.

Part II: Means, Standard Deviations, And Intercorrelations among Aggregated Study Variables

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. M SC	3.83	0.64	-							
2. M SE	2.51	0.74	.55*	-						
3. M SS	2.73	0.60	-.30*	0.04	-					
4. M EC	2.48	0.53	0.04	.19*	-0.01	-				
5. M EE	3.11	0.66	.24*	-0.01	-0.12	-.30*	-			
6. MES	3.01	0.61	0.17	.34*	0.08	.27*	-0.12	-		
7. M TL	4.08	0.42	.33*	.38*	0.01	0.12	0.03	.28*	-	
8. S TL	3.89	0.62	0.00	0.05	0.05	-0.06	-0.01	-0.01	0.13	-

Note. $N = 124$; 'M' is used to denote Focal Leader self-ratings; 'S' is used to denote direct report ratings. TL = Transformational Leadership; SE = Social Expressivity; SS = Social Sensitivity; SC = Social Control; EC = Emotional Expressivity; ES = Emotional Sensitivity; EC = Emotional Control; *$p < .05$.

TABLE 11.

Frequencies of Over-, Under- and In-Agreement Transformational Leadership Ratings

Agreement Groups	Percentage	Mean S TL	Mean M TL
M More Than S (Over-Rater)	32.30%	3.35	4.32
In Agreement	51.50%	4.03	4.05
M Less Than S (Under-Rater)	16.20%	4.53	3.73

Note. *N* = 124; TL = Transformational Leadership; 'M' is used to denote Focal Leader self-ratings; 'S' is used to denote direct report ratings.

TABLE 12

Polynomial Regression Analyses Relating Social Skill to Self and Other Leadership Appraisals

	SS	ES	SE	EE	SC	EC
Intercept	2.92	2.14	0.98	4.28	3.06	2.07
S (X_{b1})	0.5	-0.24	-0.19	-0.77	-0.35	0.10
M (Y_{b2})	-1.04	0.99	1.37	-0.95	0.79	0.40
S^2 (X^2_{b3})	0.21	0.02	0.16	0.06	0.07	-0.07
Interaction (XY_{b4})	-0.60	0.1	-0.12	0.39	0.09	-0.01
M^2 (Y^2_{b5})	0.60	-0.23	-0.18	0.15	-0.13	-0.07
R^2	0.13	0.10	0.16	0.03	0.08	0.03
Slope X = Y $b_1 + b_2$	-0.54	0.75	1.18	-1.72	0.43	0.51
Curvature X = Y $b_3 + b_4 + b_5$	0.21	-0.11	-0.13	0.60	0.03	-0.15
Slope X = -Y $b_1 - b_2$	1.54	-1.23	-1.57	0.19	-1.14	-0.30
Curvature X=-Y $b_3 - b_4 + b_5$	1.41*	-0.31	0.10	-0.18	-0.15	-0.13

Note. N = 124; Table entries are unstandardized regression coefficients for equations, with all predictors entered simultaneously; 'M' is used to denote Focal Leader self-ratings; 'S' is used to denote direct report ratings; X=Direct Report Ratings of Transformational Leadership, Y=Focal Leader Self-Ratings of Transformational Leadership; SE = Social Expressivity; SS = Social Sensitivity; SC = Social Control; EC = Emotional Expressivity; ES = Emotional Sensitivity; EC = Emotional Control; *$p < .05$.

FIGURE 1

Part One: Multilevel Antecedents and Outcomes of Transformational Leadership

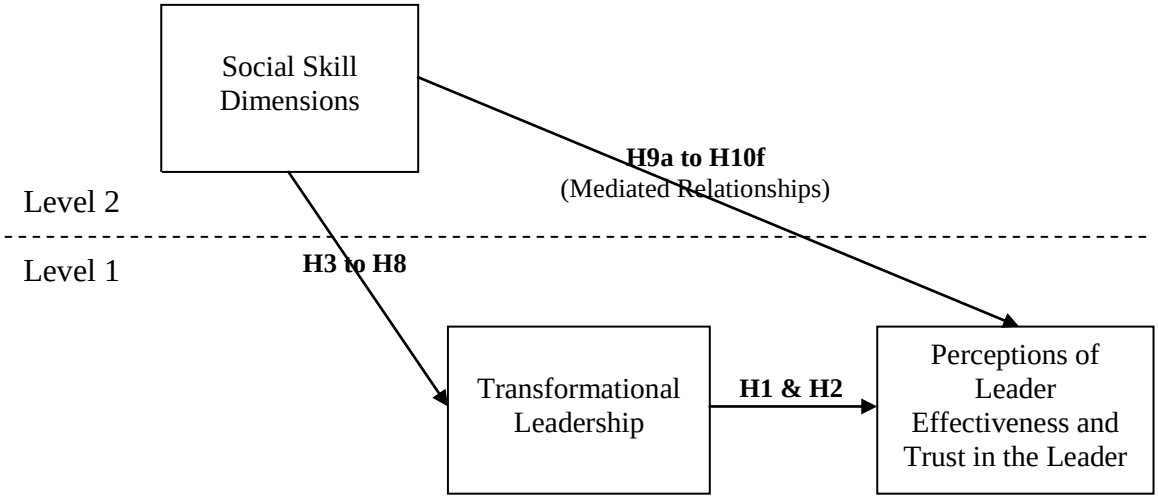


FIGURE 2

Bass and Avolio's (1994) Full Range Leadership Theory

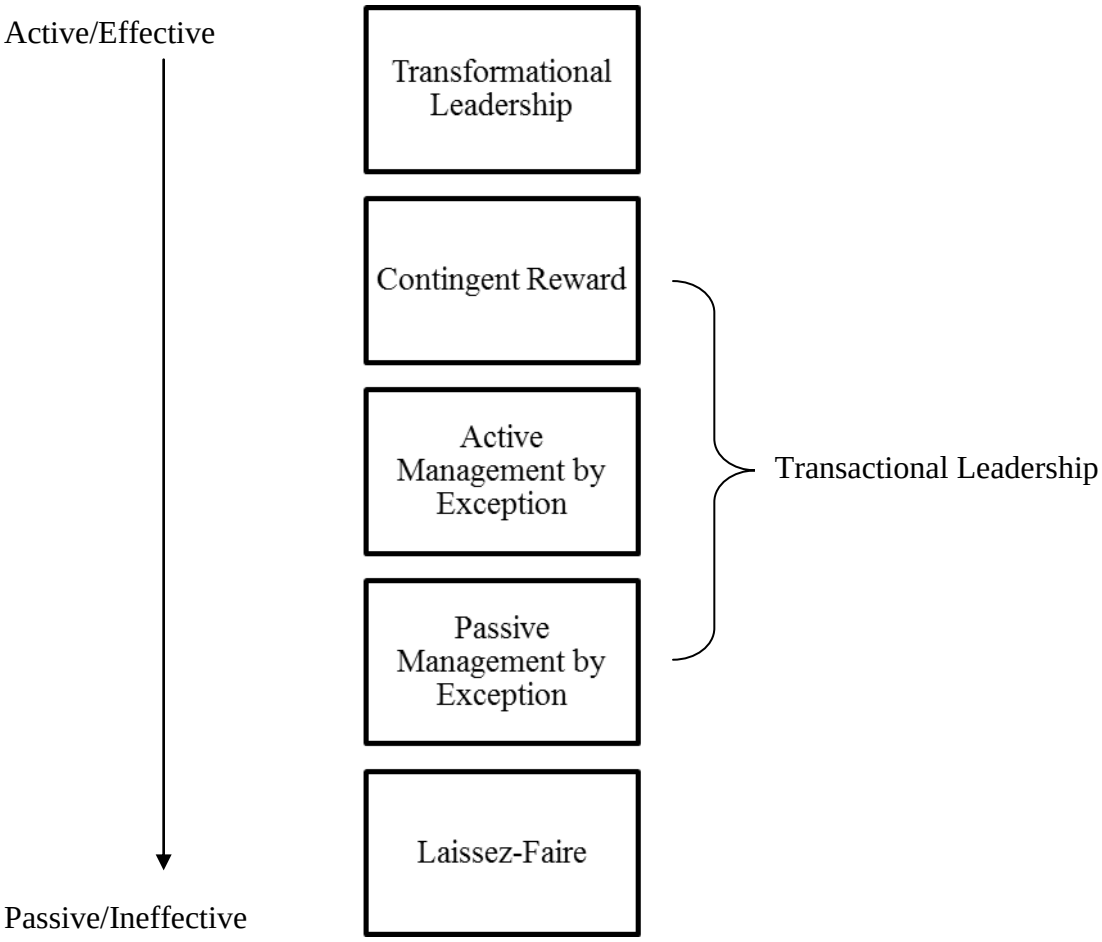


FIGURE 3

Fitted Surface Plot Depicting Focal Leader and Direct Report Transformational Leadership Ratings and the Focal Leader's Level of Social Sensitivity

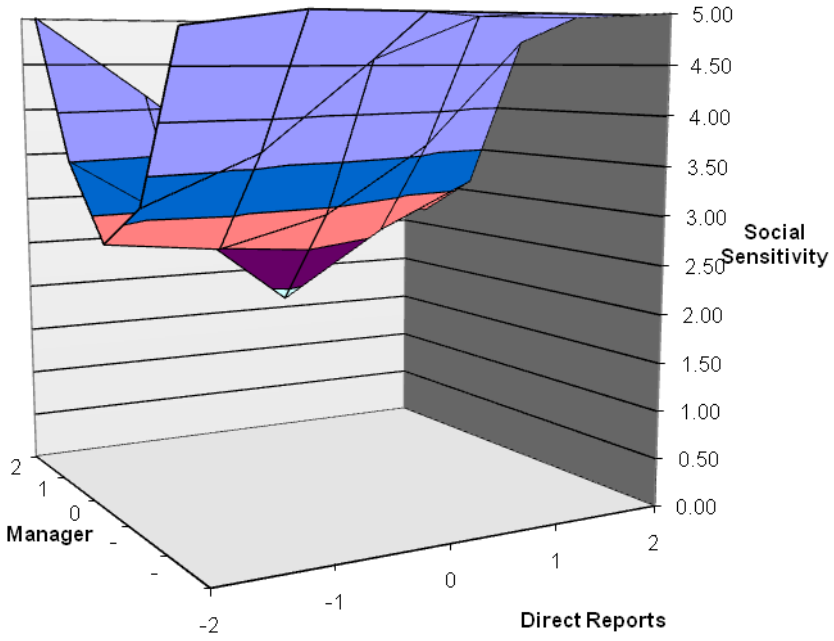


FIGURE 4

Fitted Surface Plot Depicting Focal Leader and Direct Report Transformational Leadership Ratings and the Focal Leader's Level of Emotional Sensitivity

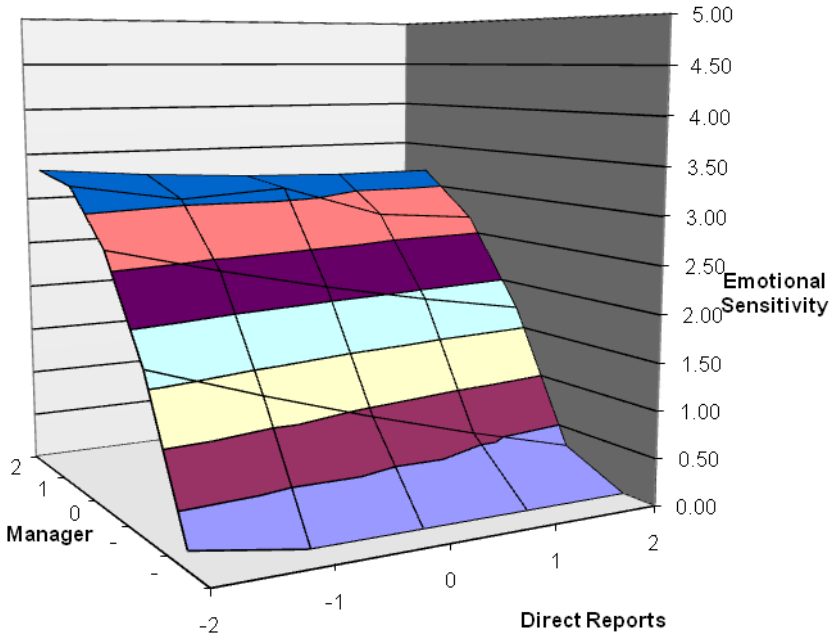


FIGURE 5

Fitted Surface Plot Depicting Focal Leader and Direct Report Transformational Leadership Ratings and the Focal Leader's Level of Social Expressivity

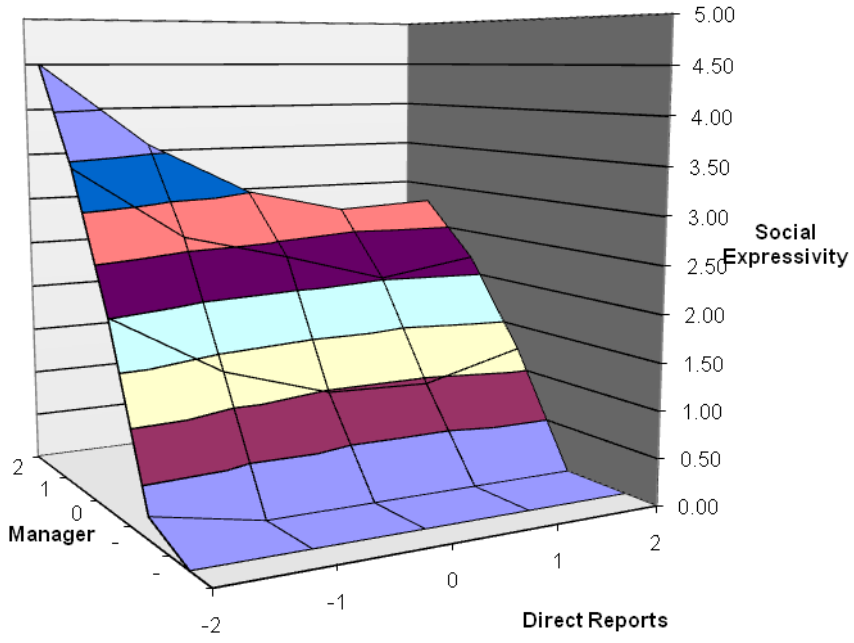


FIGURE 6

Fitted Surface Plot Depicting Focal Leader and Direct Report Transformational Leadership Ratings and the Focal Leader's Level of Emotional Expressivity

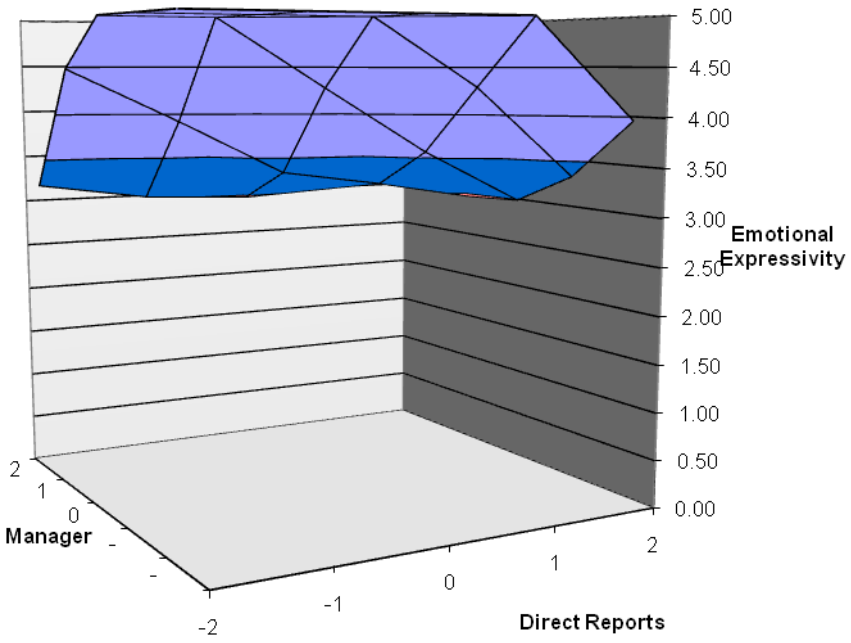


FIGURE 7

Fitted Surface Plot Depicting Focal Leader and Direct Report Transformational Leadership Ratings and the Focal Leader's Level of Social Control

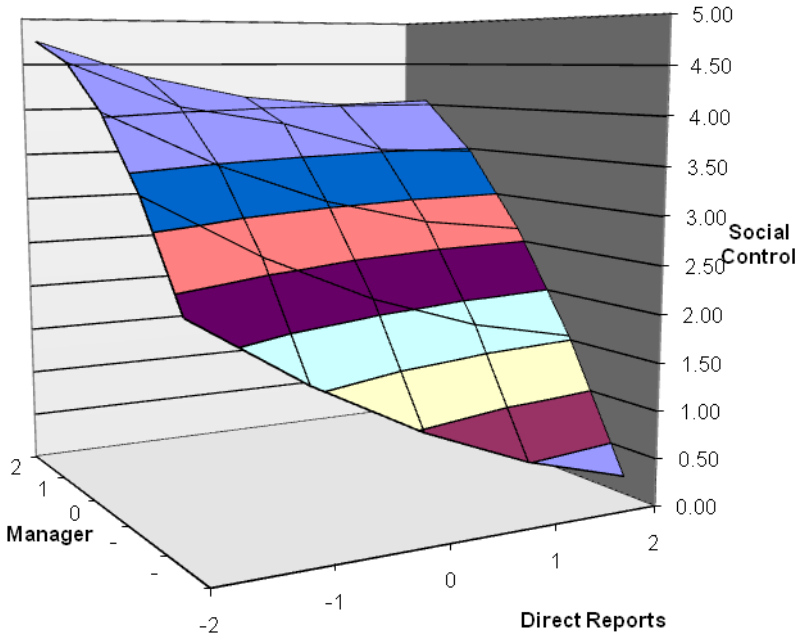
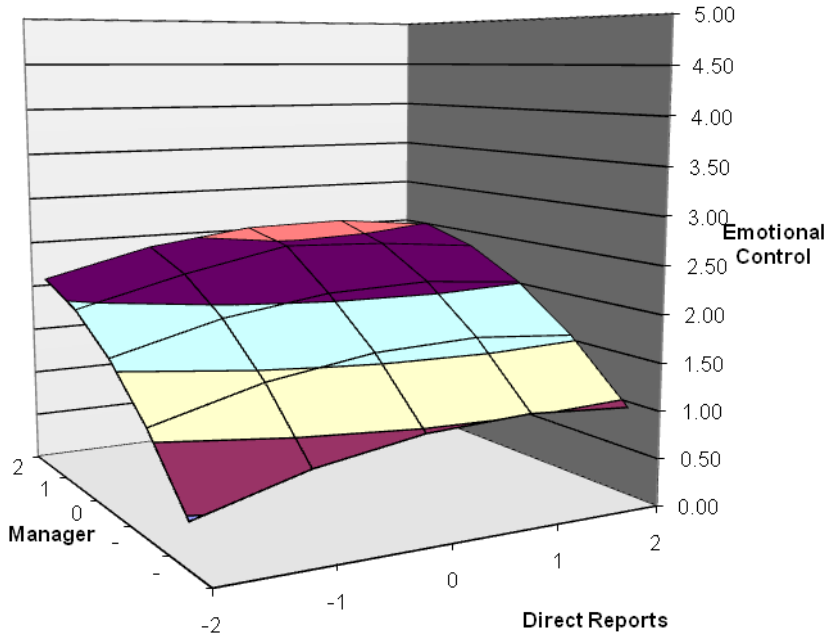


FIGURE 8

Fitted Surface Plot Depicting Focal Leader and Direct Report Transformational Leadership Ratings and the Focal Leader's Level of Emotional Control



APPENDIX A: REVIEW OF LEADERSHIP THEORY

Leadership has been investigated through the lens of various social and industrial/organizational psychology theories throughout the 20th and 21st centuries. During this time, four primary leadership paradigms have emerged: *trait approaches, behavioral approaches, situational contingency approaches, and integrative approaches* (Yukl, 2006). Each of these approaches is briefly outlined below.

Trait Approaches

Trait theories, which emerged in the early 1920s, suggested that leaders are endowed with particular characteristics that distinguish them from non-leaders or followers. These included such traits as height, weight, intelligence, self-esteem, and emotional stability (Yukl, 2006). Trait theorists sought to answer such questions as "what traits distinguish leaders from other people and what is the extent of those differences?" (Bass, 1990b, p. 38). These theorists attempted to develop a list of characteristics that would define successful leaders.

Not surprisingly, trait theories, alternatively known as the "one great man" approach, proved inadequate in accounting for the many dynamic processes involved in leadership. This theoretical paradigm neglected the situation in attempting to identify a common set of common leadership traits. Additionally, trait theorists failed to account for the intervening variables that could explain how traits affect delayed outcomes such as group performance (Yukl, 2006). The failure to link traits to effective leadership led to a shift in focus from trait theories to behavioral models; "what a leader *does* became more interesting than what a leader *is*" (Komives et al., 1998, p. 38).

Behavioral Approaches

Behavioral theories, often referred to as "the one best way to lead" approach, described leadership in terms of the actions and behaviors of leaders. Seminal studies on behavioral leadership attempted to differentiate between the behaviors of effective and ineffective leaders. Of particular influence in behavioral research realm were the Ohio State University studies, in which researchers identified two dimensions of managerial behavior: consideration and initiating structure (Yukl, 1994). Consideration, the relationship-oriented dimension of behavioral leadership, refers to "the degree to which a leader acts in a friendly and supportive manner, shows concern for subordinates, and looks out for their welfare" (Yukl, 1994, p. 54). Initiating structure, on the other hand, describes the degree to which attainment of the group's goals shapes the actions and behaviors of the leader. The resulting Managerial Grid Model, developed in 1964, juxtaposed concern for people with concern for production. Research surrounding this model suggested that effective managers and leaders demonstrate a high concern for people as well as production (Komives et al., 1998).

Later studies at the University of Michigan further differentiated between task-oriented behaviors, relationship-oriented behaviors, and participative leadership. Again these studies concluded that effective leaders focus on high performance standards for their subordinates (Komives et al., 1998). Similar to trait theories, however, behavioral leadership models were criticized for their neglect of the situation as an important moderator of the relationship between leadership behaviors and outcomes (Yukl, 2006).

Situational Contingency Approaches

Situational contingency theories emerged in an attempt to account for shortcomings of the trait and behavioral approaches by focusing on the role of context in shaping the leader's actions. Behavioral and contingency theorists agree that the effectiveness of the leader varies in accordance with the situation; however, behavioral theorists would argue such variance is related to internal factors while contingency theorists suggest external factors are the cause (Komives et al., 1998). According to contingency theories, characteristics of group members and characteristics of the environment shape the emergence and effectiveness of the leader. As noted by Yukl (1994), elements of the situation, particularly task and subordinate characteristics, have a direct impact on the perceived effectiveness of the leader. For contingency theorists, the achievement of desired leadership outcomes is contingent on the *fit* or *match* between the leader's traits, behaviors, and style, follower's preferences, and characteristics of the situation (Avolio, 2007).

Integrative Approaches

In the 1980s the trait-based notion that individual characteristics are largely responsible for differences in leadership behavior saw a revival. Integrative theorists focused once again on dispositional characteristics of the leader, but differed from traditional trait theorists in that they recognized the role of the situation in leadership and believed that many of the skills associated with competent leadership could be learned (Zaccaro, 2007). Integrative theorists were particularly interested in explaining how leaders are able to achieve extraordinary levels of follower motivation, commitment, respect, and trust (Yukl, 2006). In addition, they were interested in describing the behaviors necessary for leaders to succeed in leading their organizations or business units

to attain extraordinary results. Within the integrative paradigm, transactional and transformational leadership theories have had the greatest influence on our understanding of the way in which leaders influence and inspire followers.

APPENDIX B: GROUP- AND ORGANIZATIONAL-LEVEL OUTCOMES OF TRANSFORMATIONAL LEADERSHIP

Transformational leadership has also been examined in relation to a number of group- and firm-level outcomes, with mixed results. Many studies have reported that transformational leadership has a positive effect on group and firm performance (e.g., Jung & Sosik, 2002; MacKenzie, Podsakoff, & Rich, 2000). For example, a meta-analysis (Lowe, Kroeck, & Sivasubramaniam, 1996) showed that transformational leadership was positively related to both organizational indicators and subordinate ratings of overall work-unit effectiveness across work unit contexts (i.e., public versus private). However, other studies (e.g., Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006; Tosi, Misangyi, Fanelli, Waldman, & Yammarino, 2004) have reported a null influence of CEO transformational leadership on firm performance.

In an effort to account for contextual factors that likely attenuate the strength of the relationship between transformational leadership and firm-level outcomes, many researchers have adopted a contingency theory approach. Jung, Wu, and Chow (2008) found two attributes of the firm environment (uncertainty and competition) to moderate the relationship between CEO transformational leadership and firm innovation such that the relationship was more positive for companies with higher levels of uncertainty and competition. Others have found CEO transformational leadership to be more strongly related to firm performance in start-up companies (Peterson, Walumbwa, Byron, & Myrowitz, 2009) and in small to medium-sized firms (Ling, Simsek, Lubatkin, & Veiga, 2008).

Many of the proposed contingency models have been process-oriented; researchers frequently argue that transformational leaders positively influence the process by which business level strategies are conceptualized and deployed resulting in improved group- and firm-level results. For example, Schaubroeck, Lam, and Cha (2007) found that team potency, defined as generalized beliefs about the team's capabilities, mediated the relationship between transformational leadership and team performance in both Hong Kong and the United States. Similarly, shared vision, team reflexivity (Schippers, Den Hartog, Koopman, & van Knippenberg, 2008), and human-capital-enhancing human resource management (HRM; Zhu, Chew, & Spangler, 2005) have been found to mediate or partially mediate the relationship between transformational leadership and firm performance. Such findings suggest that transformational leaders influence firm performance by altering the attitudes and goals of employees within the organization.

APPENDIX C: OVERVIEW OF THE SOCIAL SKILL CONSTRUCT SPACE

The ability to accurately read, understand, and control social situations has long been of interest to social scientists (Ferris, Perrewe, & Douglas, 2002). Researchers have defined and operationalized a wide array of distinct but overlapping social skill constructs. Common to most of these definitions is an emphasis on the ability to cognitively read and understand social situation and adjust one's behavior in response to dynamic social demands (Ferris, Perrewe, & Douglas, 2002). In an effort to develop a more informed understanding of the broad social skill construct space, many of the most commonly studied social skill constructs are briefly reviewed below. These constructs are related to but distinct from social skills, as defined by Riggio (1986), which serve as the focal construct for the purposes of the present study.

Social Intelligence

Social intelligence was originally defined by Thorndike (1920, as cited in Ferris, Perrewe, & Douglas, 2002) as, "the ability to understand men and women, boys and girls – to act wisely in human relations" (p. 50). This definition was later expanded by Marlowe (1986) to include an understanding of the thoughts, feelings, and behaviors of oneself and others as well as the ability to appropriately act in response to this understanding. Social intelligence thus refers to an individual's ability to distinguish between his/her own emotions and those of others and accurately comprehend both the verbal and nonverbal cues sent by others within a particular situational context.

Social Competence

Social competence was first defined by Schneider, Ackerman, and Kanfer (1996) as "socially effective behavior and its cognitive, affective, and conative antecedents" (p. 471). Schneider, Ackerman, and Kanfer specifically focused on behaviors designed to help individuals achieve their personal goals in social situations. Social competence is defined as a multidimensional construct comprised of social mastery, social responsiveness, social maturity, and social control (Schneider, Roberts, & Heggestad, 2002). Social mastery refers to the ability to understand social situations and exhibit comfort, confidence, and control in social settings. Social responsiveness involves interpreting the social and emotional cues of others and exhibiting an interest in socializing with others. Social maturity refers to behaving in a socially appropriate manner and effectively coping with those who differ from oneself and/or are upset, difficult, or require patience. Finally, social control involves developing and implementing social plans and utilizing social abilities to influence others.

Self-Monitoring

Self-monitoring involves the ability to interpret social situations and respond in an appropriate manner. Individuals high in self-monitoring are sensitive to the needs of others and capable of using both verbal and non-verbal social cues to guide their own self-presentation (Ferris, Perrewe, & Douglas, 2002). The high self-monitor style is associated with low behavioral consistency; high self-monitoring individuals vary their behavior to match the demands of the situation and to create the desired social impression (Snyder, 1974).

Social Self-Efficacy

Self-efficacy has been defined by Bandura (1997) as a person's belief in his/her "capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers (1982) extended this concept to the social domain, defining social self-efficacy as an individual's belief in his or her ability to achieve desired social goals. Individuals high in social self-efficacy feel confident in their abilities to make friends and interact effectively in social situations (Heggestad & Morrison, 2008).

Political Skill

Unlike the previously discussed social skill constructs which focus on the individual's ability to effectively read and respond to social and situational cues, the political skill domain focuses more extensively on "exercising influence effectively through persuasion, manipulation, and negotiation" (Ferris, Perrewe, & Douglas, 2002, p. 53). High levels of political skill are akin to "good acting" in that an individual demonstrates a level of authenticity that allows him or her to have control of the behavior and feelings of others. Politically skilled leaders utilize impression management techniques to vary their behavior in accordance with the situation in order to best meet the needs of their followers. Moreover, these leaders change their behavior in response to situational demands in such a way as to garner trust and confidence and actively influence the responses of their followers (Ferris, Perrewe, & Douglas, 2002).

APPENDIX D: EMAIL INVITATION AND INFORMED CONSENT FOR DIRECT REPORTS

EMAIL INVITATION:

Dear Piedmont Employee,

I would like to invite you to participate in a study being conducted by researchers from the University of North Carolina at Charlotte. The purpose of this study is to examine the leadership style and interpersonal preferences of managers at Piedmont. Specifically, you will be asked questions about the way in which your manager interacts with others and the types of leadership behaviors that he/she exhibits. Completion of the entire survey should take only 7 to 10 minutes.

Your responses to this survey are strictly confidential. All responses will be submitted directly to the primary investigator through a secure, online portal. Any information reported to Piedmont Natural Gas will be in summary format only; there will be no way for any Piedmont representatives to identify you based on your responses to this survey.

Your participation in this survey will help us to better understand leadership in the energy industry and may help to advance leadership training and development initiatives currently underway at Piedmont.

If you choose to participate, please click on the link below to be directed to the secure online survey.

We thank you in advance for your participation.

Sincerely,

Marisa Adelman, Primary Investigator
University of North Carolina at Charlotte
(704) 620-2440 | madelman@uncc.edu

Eric Heggestad, PhD. Co-Investigator
University of North Carolina at Charlotte
(704) 687-4520 | edhegges@uncc.edu

DIRECT REPORT INFORMED CONSENT (First Page of Online Survey):

DIRECTIONS:

For this study, you are being asked to fill out the attached questionnaire regarding your manager's leadership style and interpersonal preferences in the workplace. Specifically, you will be asked questions about the way in which your manager interacts with others and the types of leadership behaviors that he/she exhibits. Completion of this survey should take about 7 to 10 minutes.

Please Note: *For the purpose of this study, please* ***refer to the manager who provides your annual performance (MVP) ratings.*** *Please select your manager's name from the drop-down menu at the beginning of the survey and refer to him/her as you respond to each of the questions.*

PARTICIPATION INFORMATION:

Your participation is completely voluntary. You may discontinue your participation at any time, and you may also choose not to answer any question(s) that you do not wish to answer for any reason. Your responses will be kept strictly confidential. Your responses will be submitted directly to the investigator through a secure, online portal. All identifying information will be removed upon receipt of the survey. Any information reported to Piedmont Natural Gas will be in overall summary format only; there will be NO WAY that Piedmont representatives could identify you based on your responses to this survey.

POSSIBLE RISKS AND BENEFITS:

There are minimal risks to participating in this study. Possible risks are that you may experience discomfort in answering some of the questions, or concern that your responses may be disclosed. The benefits of this study include a greater understanding of organizational leadership and experiences of employees at multiple levels of a work organization. Personal benefits include the potential for a greater understanding of psychological research and the opportunity to provide your opinion to your work organization.

QUESTIONS OR CONCERNS:

If you have any questions, please feel free to contact Marisa Adelman, the Primary Investigator, at 704-620-2440 or madelman@uncc.edu or Eric Heggestad, Ph.D., at 704-687-4520. If you have any questions regarding your rights as a participant, contact the UNC Charlotte Compliance Office at 704-687-3309.

If you choose to participate, please click on the link below to be directed to the secure online survey.

APPENDIX E: EMAIL INVITATION AND INFORMED CONSENT FOR FOCAL LEADERS

EMAIL INVITATION:

Dear Piedmont Manager/Supervisor,

I would like to invite you to participate in a study being conducted by researchers from the University of North Carolina at Charlotte. The purpose of this study is to examine leadership styles and interpersonal preferences in the workplace. Specifically, you will be asked questions about your interactions with others and the types of leadership behaviors that you exhibit. Completion of the entire survey should take only 15 to 20 minutes.

Your responses to this survey are strictly confidential. All responses will be submitted directly to the primary investigator through a secure, online portal. Any information reported to Piedmont Natural Gas will be in summary format only; there will be no way for any Piedmont representatives to identify you based on your responses to this survey.

Your participation in this survey will help us to better understand leadership in the energy industry and may help to advance leadership training and development initiatives currently underway at Piedmont.

If you choose to participate, please click on the link below to be directed to the secure online survey.

We thank you in advance for your participation.

Sincerely,

Marisa Adelman, Primary Investigator
University of North Carolina at Charlotte
(704) 620-2440 | madelman@uncc.edu

Eric Heggestad, PhD. Co-Investigator
University of North Carolina at Charlotte
(704) 687-4520 | edhegges@uncc.edu

MANAGER/SUPERVISOR INFORMED CONSENT (First Page of Online Survey):

DIRECTIONS:

For this study, you are being asked to fill out the attached questionnaire regarding your leadership style and interpersonal preferences in the workplace. Specifically, you will be asked questions about the way in which you interact with others and the types of leadership behaviors that you exhibit. Completion of this survey should take about 15 to 20 minutes.

Please note: Your subordinates will also be asked to answer questions on a separate survey regarding your leadership style. *Please select your name from the drop-down menu at the beginning of the survey so that we may match your responses to those of your subordinates.*

PARTICIPATION INFORMATION:

Your participation is completely voluntary. You may discontinue your participation at any time, and you may also choose not to answer any question(s) that you do not wish to answer for any reason. Your responses will be kept strictly confidential. All survey responses, including those of your subordinates, will be submitted directly to the primary investigator through a secure, online portal. All identifying information will be removed upon receipt of the survey. Any information reported to Piedmont Natural Gas will be in overall summary format only; there will be NO WAY that any Piedmont representative could identify you based on your responses to this survey.

POSSIBLE RISKS AND BENEFITS:

There are minimal risks to participating in this study. Possible risks are that you may experience discomfort in answering some of the questions, or concern that your responses may be disclosed. The benefits of this study include a greater understanding of organizational leadership and experiences of employees at multiple levels of a work organization. Personal benefits include the potential for a greater understanding of psychological research and the opportunity to provide your opinion to your work organization.

QUESTIONS OR CONCERNS:

If you have any questions, please feel free to contact Marisa Adelman, the Primary Investigator, at 704-620-2440 or madelman@uncc.edu or Eric Heggestad, Ph.D., at 704-687-4520. If you have any questions regarding your rights as a participant, contact the UNC Charlotte Compliance Office at 704-687-3309.

If you choose to participate, please click on the link below to be directed to the secure online survey.