# A Field Investigation of Implicit Theory Congruence in Leader-Follower Relationships

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## ABSTRACT

The purpose of the following study was to investigate the role of interpersonal congruence between leaders' and followers' implicit theories of leadership (ILTs) and followership (IFTs) in both partners' perspectives of the leader-follower relationship. While most literature focuses on assessments of the leader-member exchange (LMX) relationship, this study examined perceived support, identification with one's partner, and contribution to the relationship, in addition to LMX. Congruence between self-views and interpersonal congruence on implicit theories was examined as moderators of these relationships, such that the strength of these relationships was predicted to increase as self-views aligned more highly with implicit theories. Data from 103 independent pairs of full-time working adults (across an organizational sample as well as varied workforce snowball sample) were analyzed using eight manifest path models. Leader ILT – follower ILT congruence significantly and positive predicted leader-rated LMX and perceived support, but not identification and contribution. Leader IFT – follower IFT congruence significantly and positive predicted follower-rated LMX and perceived support, but not identification and contribution. The results of this study suggest expectations are meaningful predictors of both partner's assessments of multiple relationship-oriented outcome variables, but only with regard to perceptions of outcomes from the perspective of one's dyadic partner.

# Acknowledgements

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# Chapter 1 – Introduction

Maintaining a high quality professional relationship is important for both leader and follower dyads. For the follower, relationship quality with a leader motivates outcomes such as satisfaction and performance, as well as perceptions of leader effectiveness (Liden, Wayne, & Stillwell, 1993; van Gils, van Quaquebeke, & van Knippenberg, 2010). For the leader, high quality relationships with followers are associated with higher performance as a leader, job satisfaction, support, sharing of decision making processes with followers, and task efficiency (Crouch & Yetton, 1988; Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975; Graen & Schiemann, 1978; Liden et al., 1993; Kozlowski & Doherty, 1989; Liden & Graen, 1980; Scandura, Graen, & Novak, 1986). High quality relationships have been studied from either the leader's perspective or the follower's perspective of the relationship; however, few studies have examined both perspectives (Coyle & Foti, 2014; Engle & Lord, 1997; Hiller, DeChurch, Murase, & Doty, 2011; van Gils et al., 2010). Given leadership is about understanding the influence between a leader and follower, relationship quality must be studied from the perspective of both partners.

Both the leader and follower consider how his/her partner views the relationship, in addition to how they he/she views the relationship (Lord & Maher, 1991). For example, it is possible that an individual may view his or her self as belonging and contributing to the relationship strongly but may not believe his/her partner to be supportive or willing to contribute to the relationship, or vice versa (van Gils et al., 2010). To fully understand both dyadic partners' perspectives of the relationship, we must examine how the leader and follower view themselves as contributing and belonging to the relationship, in addition to how they believe their partner views the relationship.

To benefit from examining both partners' perspectives of leader and follower contributions to a relationship, we must focus on examining constructs beyond the quality of the exchange relationship between leaders and followers, known as Leader-Member Exchange (LMX). Graen, Hui, & Taylor, 2006; Graen, Novak, & Sommerkamp, 1982). While examining how an individual believes his/her partner views the quality of the exchange relationship is important, workplace roles are multi-dimensional, with leaders and followers serving many roles in their daily interactions with each other (Katz & Kahn, 1978). Furthermore, leaders and

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followers focus on different aspects of a leader-follower relationship and have different perceptions of their shared and observed relationships (Erdogan & Bauer, 2014). While a leader may view the relationship positively, based on positive work contributions, a follower may rate the relationship quality negative, due to lack of support or trust, or vice versa (Greguras & Ford, 2006; Edrogen & Bauer, 2014; Krackhardt, 1990; Liden & Maslyn, 1998; van Gils et al., 2010). Thus, relationship quality is best assessed when differentiated based on the exchanges between dyadic partners, and multiple dimensions of relationship quality between a leader and follower are needed (Greguras & Ford, 2006).

While previous research has taken a multi-dimensional approach to assessing LMX relationships, examining LMX as well as other dimensions of a high quality working relationship provides a more comprehensive view of how that individual views the relationship. Specifically, examination of identification, support, and contribution in addition to LMX are important, as each have been identified as important dimensions of working relationships (Mael & Ashforth, 1992; Greguras & Ford, 2006; Liden & Maslyn, 1998; van Gils et al., 2010). Identification with one's dyadic partner incorporates one's social identity and, even in the absence of interaction with one's partner, is reflective of a high quality relationship (Mael & Ashforth, 1992). Perceived support from one's partner has been identified as an indicator of relationship quality between a leader and follower, yet separate from LMX (Ganster, Fusilier, & Mayes, 1986; Karaske, Triantis, & Chaudhry, 1982; Liden & Maslyn, 1998). In a similar way, examining how he/she is willing to contribute to in the relationship adds a meaningful perspective because it allows for assessment of whether or not that individual is willing to reciprocate positively within the relationship (Liden & Maslyn, 1998). Greguras and Ford (2006), however, provide evidence that this dimension is not perfectly correlated with unidimensional measures of LMX (.66 respectively). By examining partner's perceptions of support, identification, and contribution, in addition to LMX, we pave the way for greater understanding of how partners assess the leader-follower relationship.

While examining multiple dimensions of a high-quality relationship is important, it is also important to examine variables that could influence an individual's assessment of these dimensions of relationship quality. One important predictor of relationship quality is perceptions of leader and follower roles. Perceptions of leaders and followers shape expectancies and elicit confirming responses, helping to create a leadership process in which relatively stable social

structures are evaluated by individuals in differentiated roles as leader and follower (Shondrick & Lord, 2010). These social structures are the basis of interactions between a leader and follower and thus, are important for both partners in a relationship (Lord & Maher, 1991). How a leader and follower perceive the roles of both leaders and followers, therefore, determines how each partner assesses the social structure and behaves within their roles. When the social structure is mutually understood, each partner will understand the behavior of the other and consequently assess the relationship as high quality (Shondrick & Lord, 2010). The primary aim of this study is to examine how similarity in leader's and follower's perceptions of leaders and followers impacts each partner's assessment of relationship quality.

Research focusing on perceptual processes used by a leader and follower to determine relationship quality has been growing (Coyle & Foti, 2014; Engle & Lord, 1997; Uhl- Bien & Pillai, 2007; Sy, 2010; Whiteley, Sy, & Johnson, 2012). One focus of this research has been the role of schemas, which are knowledge structures that represent expectations for both the leader and follower role (Engle & Lord, 1997; Lord & Maher, 1991; Lord, Foti, & De Vader, 1984; Shamir, 2007; Shondrick & Lord, 2010). These schemas are the lenses through which a leader and follower examine the behavior of his/her partner as well as his/her own behavior (van Gils et al., 2010; Shondrick & Lord, 2010). The influence of an individual's prior expectations for leaders in shaping perceptions of the dyadic relationship has been well documented (Epitropaki & Martin, 2005; Foti & Lord, 1987; Liden et al., 1993; Lord et al., 1984; Lord & Maher, 1991; Shondrick & Lord, 2010; van Gils et al., 2010). Interest in the influence of individual's expectations for followers has been growing as well (Carsten, Uhl-Bien, West, Patera, & McGregor, 2010; Lord & Maher, 1991; Shondrick & Lord, 2010; Shondrick, Dinh & Lord, 2010; van Gils et al., 2010).

Implicit Leadership Theories (ILTs) and Implicit Followership Theories (IFTs) are schemas about leaders and followers used to guide and interpret behavior of their partner in a leader-follower relationship. ILTs are defined as schemas specifying the traits and behaviors characterizing leaders (Lord, Foti, & De Vader, 1984; Lord & Maher, 1991). Similarly, IFTs are defined as schemas about the traits and behaviors characterizing followers (Shondrick & Lord, 2010; Sy, 2010). Implicit theories are developed on the basis of socialization processes and prior experiences with leaders and followers, are stored in memory, and are activated when individuals interact with someone resembling that category. Followers use ILTs to interpret the behavior of

leaders (van Gils et al., 2010).  In addition, leaders perceive and interpret their behavior as leaders through their ILTs (Lord & Maher, 1991; van Gils et al., 2010).  Similarly, leaders use IFTs to interpret the behavior of followers (van Gils et al., 2010).  Additionally, followers perceive and interpret their behavior through their IFTs (van Gils et al., 2010).  Thus, implicit theories not only serve as filters for how individuals perceive others' behavior, but also serve to generate expectations for their own behavior.  In a dyadic relationship, because both partners hold ILTs and IFTs, there are four sets of expectations that influence the quality of exchanges; the leader's ILT and IFT, as well as the follower's ILT and IFT.

Because individuals are likely to have different experiences as a leader and/or follower, implicit theories are likely to vary from individual to individual.  These differences affect how each partner interprets the behavior of their dyadic partner as meeting their expectations or not, thus impacting the quality of the relationship (Coyle & Foti, 2014; Foti, Bray, Thompson, & Allgood, 2012; Lord & Maher, 1991; Engle & Lord, 1997; Epitropaki & Martin, 2005; van Gils et al., 2010).  The degree of alignment or misalignment in ILTs and IFTs, therefore, is at the core of the mutual influence process (Coyle & Foti, 2014; Engle & Lord, 1997; Lord & Maher, 1991).

According to Epitropaki, Sy, Martin, Tram-Quon, and Topakas (2013), inter-personal congruence on implicit theories exists when individuals hold similar implicit theories of a leaders and followers.  Engle and Lord (1997) pioneered examination of inter-personal congruence on implicit theories by studying the extent to which working supervisors and subordinates held similar ILTs and the resulting relationship quality.  Following the work of Engle and Lord (1997), Coyle and Foti (2014) expanded on this perspective by examining congruence on both ILTs *and* IFTs in a laboratory stetting.  By studying congruence on both ILTs *and* IFTs in a field setting, we can evaluate the extent to which congruence on both schemas play a role in determining perceptions of relationship quality.

In addition to congruence between dyadic partners' implicit theories,  congruence between how a leader or follower views his/her own traits and those specified in implicit theories held by both partners partially determines the influence of implicit theory congruence on relationship quality (Lord & Maher, 1991; van Gils et al., 2010).  When an individual's self-view aligns with his/her partner's implicit theory, formal and informal identities will be mutually reinforced and understood (DeRue & Ashford, 2010; Lord & Maher, 1991).  From the leader's perspective, if a leader's self-view aligns with his/her *partners'* expectations for leadership;

he/she will be likely to emphasize this similarity in ILTs when judging relationship quality (Engle & Lord, 1997; DeRue & Ashford, 2010; van Gils et al., 2010). Additionally, when an individual's self-view aligns with his/her implicit theory, this individual will be more likely believe his or her self to be meeting role expectations and expect the same from a dyadic partner (DeRue & Ashford, 2010; Hochwälder, 1996). For example, if a leader's self-view aligns with his/her *own* expectations for leadership, he/she is more likely to use IFTs when judging relationship quality (Engle & Lord, 1997; DeRue & Ashford, 2010; van Gils et al., 2010). These processes are mirrored for followers. By examining congruence between expectations and self-views, we can gain a more comprehensive awareness of how both partners use cognitive categories to identify with their role and, subsequently, interpret contributions to their relationship.

The purpose of the following study is two-fold. First, I investigate how congruence between dyadic partners' ILTs and IFTs affects both perspectives of the leader-follower relationship. Second, congruence between self-views and role expectations held by both dyadic partners is examined as a moderator of these relationships. Therefore, this study makes unique contributions to existing literature regarding the role of perceptions in leader-follower relationships. By investigating congruence on implicit theories from the perspectives of both dyadic partners, I address calls in previous research for a deeper understanding of role expectations in leader-follower relationships (Coyle & Foti, 2014; Lord & Brown, 2004). In addition, investigating the extent to which self-views of leadership and followership influence the relationship between implicit theory congruence and LMX, advances our understanding of perceptual processes in predicting LMX relationships, as called for by Epitropaki et al. (2013) and van Gils et al. (2010). Finally, I extend our understanding of the role of implicit theory congruence in leader-follower relationships by incorporating leader and follower perspectives of how *both* partners assess the relationship quality (e.g., how an individual judges the relationship and how he/she believes their partner behaves in the relationship).

## 1.1 - Literature Review

### 1.1.1 - Leader-Follower Relationships

While leader-follower relationships have typically been studied within the framework of LMX, researchers have made the distinction that leader-follower relationships are multi-dimensional and include multiple constructs that may indicate a high quality working

relationship between leaders and followers (Greguras & Ford, 2006; Dienesch & Liden, 1986; Liden & Maslyn, 1998). Vertical dyad linkage theory, later known as LMX (Graen, 1976), was conceptually based on role theory (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). As discussed by Greguras and Ford (2006), however, role theory suggests that workplace roles are multi-dimensional, with leaders and followers serving many roles in their daily exchanges with each other (Katz & Kahn, 1978). For example, a leader may potentially have to act as a director, communicator, scheduler, negotiator, mentor, or administrator. In a similar way, a follower may act as an assistant, task filler, acolyte, mentee, or liaison. From this perspective, it is likely that different types of leader-follower relationships, and exchanges within these relationships, are likely to emerge (Greguras & Ford, 2006; Liden & Maslyn, 1998; Liden, Sparrowe, & Wayne, 1997).

LMX has also been examined from the perspective of social exchange theory, which describes the quality of interactions between individuals engaged in a relationship at the dyadic level (Brown, 1986; Greguras & Ford, 2006; Dienesch & Liden, 1986; Liden & Maslyn, 1998; Liden et al., 1997). Previous researchers have pointed out that leader-follower relationships are differentiated based on social currencies being exchanged (Dienesch & Liden, 1986). While partners within some dyads form relationships founded on positive reciprocal exchanges (e.g., pleasant interactions, economic contributions, social support, and identification) others form relationships founded on negative exchanges (.e.g., competing goals, lack of support, and misunderstanding of each other) (Greguras & Ford, 2006; Krackhardt, 1990; Liden & Maslyn, 1998; Liden et al., 1997; Sparrowe & Liden, 1997; van Gils et al., 2010). Furthermore, while one leader-follower relationship may be founded on identification and positive work-related contributions, another may be founded on positive daily exchanges, and mutual support (Greguras & Ford, 2006; Liden & Maslyn, 1998; Ryan, King, Adis, Gulick, Peddie, & Hargraves, 2012). Both of these dyads might report a high quality relationship, but the interactions and contributions exchanged may be very different (Greguras & Ford, 2006). Therefore, relationship quality is best assessed when differentiated based on the exchanges between dyadic partners, highlighting the importance of assessing multiple dimensions of relationship quality (Greguras & Ford, 2006; Liden & Maslyn, 1998).

In order to further the understanding of leader-follower relationships, it is important to evaluate support from one's dyadic partner, identification with one's dyadic partner, and perceptions of one's contribution within the relationship, in addition to the LMX relationship. Liden and Maslyn (1998) argue contribution is important dimensions of leader-follower relationships, however Greguras and Ford (2006) provide evidence that this dimension is not perfectly correlated with unidimensional measures of LMX (.66 respectively). As such, there evidence to suggest unique variance is captured by evaluating exchange quality apart from contribution. In addition, Ryan et al., 2012 argue that support is an important commodity exchanged between leaders and followers and can impact the effectiveness of supervisors, as well as subordinates. Finally, Mael and Ashforth (1992) argue that identification with one's dyadic partner incorporates one's social identity and, even in the absence of interaction with one's partner, is reflective of a high quality relationship. Thus, evaluation of these four constructs within a leader-follower relationship provides a more comprehensive assessment of the commodities exchanged between leaders and followers and, as such, a more comprehensive assessment of the over-all relationship quality.

While perceptions of contributions may vary between dyadic relationships, perceptions of various dimensions of relationship quality may vary between partners within the *same* dyadic relationship as well. In a leader-follower relationship, an individual perceives and judges the commodities offered in the relationship being offered by himself/herself as well as his/her partner (Graen & Scandura, 1987). When a dyadic partners perceives the value of the commodities exchanged with his/her partner as being greater, the perceived relationship quality also becomes greater (Wayne, Shore, & Liden, 1997). Conversely, when a partner perceives commodities exchanged to be of little value, perceptions of the relationship quality will decrease as well. By evaluating each partner's assessment of the relationship quality, we can gain insight regarding whether each partner perceives his/her own offerings, as well as the offerings made by the other partner, as valuable.

Several studies have demonstrated that relationship quality is often assessed differently by dyadic partners in different roles (Gerstner & Day, 1997; Richards & Hacket, 2012; van Gils et al., 2010). Gregarus & Ford (2006) found evidence that perceptions of contributions between partners and affect in a leader-follower relationship are moderately correlated at .21 and .41 respectively. A meta-analysis in which primary data was also collected (Sin, Nahrgang, &

Morgeson, 2009) suggested that the similarity of leaders' and followers' perceptions of their LMX relationship quality is often only moderate, despite the fact that both parties are part of and rate the same relationship. Specifically, Sin et al. (2009) found a correlation of .37 between leaders' assessment of LMX and members' assessment of LMX. An examination of moderators in this research showed that longer relationship tenure showed higher levels of agreement (Sin et al., 2009). The modest correlations demonstrate clear disagreement between leaders and followers in how they assess the quality of the relationship.

Disagreement in how dyadic partners assesses relationship quality and contributions made by each other is due, in part, to differences in implicit expectations held regarding how each partner should act within a specific leader or follower role (Lord & Maher, 1991; van Gils et al., 2010). These expectations are developed over time and individual experience as a leader or follower and can influence perceptions of a partner's behavior in a dyadic relationship (Carsten et al., 2010; Shamir, 2007; Schyns & Schilling, 2011; Zhu, 2013). Since leaders and followers often have access to different resources and personal experiences in leader and follower roles, expectations of leaders and followers differ between individuals. In a study of 166 newly hired employees over the course of a six month introductory period at work, leader and follower expectations of each other assessed in the first five days predicted LMX two weeks and six weeks later (Liden et al., 1993). Therefore, expectations of leaders and followers in an exchange relationship are important considerations of both leaders and followers when evaluating the quality of an LMX relationship (Liden et al., 1993; Lord & Maher, 1991; Lord et al., 1984). Differences in expectations between leaders and followers subsequently lead each member of the dyad to evaluate the relationship differently (Engle & Lord, 1997; Gerstner & Day, 1997; Lord & Maher, 1991; Lord et al., 1984; Sin et al., 2009). One source of expectations is ILTs.

## 1.2 - Implicit Leadership Theories

It is widely accepted that leadership is a perceptual process as well as a behavioral process (Shondrick & Lord, 2010). These perceptual processes are a direct result of the leader categorization process described by Lord et al. (1984), based on Rosch's (1977, 1978) work in cognitive categorization. In order to make efficient use of information obtained on a daily basis, individuals create cognitive shortcuts which allow for simplified information processing (Rosch, 1977, 1978). Schemas or categories, which are knowledge structures that develop through

experience, provide one such cognitive shortcut and are constructed and organized around information that is useful for the perceiver to navigate a particular situation, such as professional relationships.

Categories are organized horizontally with respect to contrasting interpretations of a stimulus, such as characteristics associated with a leader vs. characteristics of someone who is not a leader, and hierarchically around levels of abstraction within a particular category (Rosch; 1977; 1978; Shondrick & Lord, 2010). *Superordinate level* categories, such as "leaders," are abstract and inclusive. Categories at the *basic level,* such as "business leaders," are most commonly used and most relatable to one's world. The *subordinate level* categories, such as "top-level business leaders," are more concrete and exclusive than basic level categories (Lord et al., 1984; Shondrick & Lord, 2010).

Rosch (1977) asserted that categories develop around prototypes; abstract composites of the traits associated with a category or category member. Prototypical features are widely shared among category members and, as such, are used to evaluate whether an individual's behavior is representative of a particular category (e.g., if an individual's behavior fits that of a leader) (Rosch, 1977, 1978). Based on Rosch's (1977, 1978) work, Lord and colleagues (Lord et al., 1984; Lord, Foti, & Phillips, 1982; Lord & Maher, 1991) subsequently developed a recognition-based process of leadership that describes how categorization influences perception, memory, and interactions with a potential leader. As such, ILTs guide information processing by providing a basis for how to interpret the behavior of another in a leadership role (Lord & Maher, 1991; Shondrick & Lord, 2010). If there is a match between perceptions of the individual and the traits associated with a leader held by the perceiver, his/her leader prototype, it is more likely that the perceiver will recognize that individual as a leader (Lord et al., 1984).

While followers use ILTs to understand and predict the behavior of their leaders, leaders use ILTs to guide their behavior as leaders (Lord & Maher, 1991). For example, a leader who believes sensitivity is a prototypical characteristic of leaders may strive to display sensitive behavior. Furthermore, Lord and Maher (1991) suggested that if managers have clear ILTs, comparison between themselves as leaders and the traits in their ILTs could provide a means for self-evaluation. In support of this view, Foti et al. (2012) found evidence that individuals' self-

schemas of leadership corresponded with their ILTs. Thus, leaders compare their own behavior with behavioral standards derived from their ILTs in an effort to guide future behavior (Lord & Maher, 1991; Lord & Kernan, 1987).

Research has indicated certain traits are most representative of the superordinate level leader category (Lord et al., 1984; Offermann, Kennedy, & Wirtz, 1994; Schyns & Schilling, 2011). Offermann et al. (1994) identified eight distinct dimensions that define central tendency leader prototypes: sensitivity, dedication, tyranny, charisma, attractiveness, intelligence, strength, and masculinity. These eight dimensions were generally consistent across gender and stimuli perceived. Based on the work of Offermann et al. (1994), Epitropaki and Martin (2004) developed a 21-item measure of ILTs of business leaders and replicated some of these dimensions: sensitivity, dedication, tyranny, intelligence, dynamism, and masculinity. These six dimensions were organized into second-order factors that reflect the difference between the positive, or prototypical, and negative, or anti-prototypical, traits and were generally stable over a one-year time period (Epitropaki & Martin, 2004). Taking a different approach, House et al. (1999, 2004) introduced culturally endorsed Implicit Leadership Theories (CLTs), focusing on traits of effective leaders and identified six global dimensions of CLTs: charismatic, team-oriented, self-protective, participative, humane, and autonomous. This suggests certain traits are associated with individuals in the role of a leader and are consistent over time. As such, an individual involved in a dyadic working relationship may evaluate a leader's behavior based the extent to which they display these traits.

Similarity between dyadic partner's ILTs can influence the quality of the working relationship (Coyle & Foti, 2014; Engle & Lord, 1997; Lord & Maher, 1991; Shondrick & Lord, 2010; van Gils et al., 2010). As such, perceptual processes operate at the core of the exchange relationship between a leader and a follower (Lord & Maher, 1991). Since ILTs guide not only behavior, but the interpretation of that behavior, superior relationship quality between a leader and a follower can only be achieved when the behavior of both dyadic partners aligns with expectations and both dyadic partners interpret it similarly (Coyle & Foti, 2014; Engle & Lord, 1997; Lord & Maher, 1991; Shondrick & Lord, 2010).

## 1.3 - Implicit Followership Theories

In the leadership process, cognitive categories of followers are as equally important as cognitive categories of leaders (Carsten et al., 2010; Shondrick & Lord, 2010). In most existing

leadership perception research, however, the focus is on how followers perceive their leaders and their leaders' behaviors (Carsten et al., 2010). As Carsten et al. (2010) pointed out, focusing on how followers view their leaders leaves a dearth of studies explaining how followers view their *own* roles; which is equally important in determining assessments of exchange quality in leader-follower relationships. As such, researchers have called for more studies that describe how followers perceive themselves (Carsten et al., 2010; Lord & Brown, 2004).

Rosch's (1977, 1978) theory of cognitive categorization may be used to explain how individuals evaluate the behavior of an individual as a follower vs. a non-follower. This theory is also the basis of IFTs (Coyle, Snead, Foti, Shah, Thompson & Massara, 2014; Shondrick & Lord, 2010; Uhl- Bien & Pillai, 2007). As with leader categories, follower categories are organized hierarchically in superordinate, basic, and subordinate level categories (Shondrick & Lord, 2010). Prototypical features are shared among category members and are used to evaluate whether an individual's behavior is representative of a "follower" (Rosch, 1977, 1978).

Follower categorization theory posits that if an individual's behavior is perceived in a way that's similar to a perceiver's concept of a follower, it is more likely that the perceived individual will be viewed as a follower (Shondrick & Lord, 2010). It should be noted, however, that an individual may be perceived as a follower through the perception that his/her dyadic partner is a leader (Coyle & Foti, 2014; Uhl- Bien & Pillai, 2007; Shondrick & Lord, 2010). IFTs provide a basis for how to interpret the behavior of someone occupying a followership role and also act as a guide for an individual's own behavior as a follower (Lord & Maher, 1991; Shondrick & Lord, 2010). For example, if a leader believes that a follower should be productive, that same leader may more easily recognize an individual who displays productivity as a follower. If a follower believes productivity is an important characteristic of a follower, he/she may strive to be productive when working as a follower.

Sy (2010) and Carsten et al. (2010) pioneered the research for understanding the role of the follower. Using a qualitative method to study workplace subordinates, Carsten et al. (2010) concluded that followers construct their definitions of their roles around passive, active, and proactive roles. Additionally, Carsten et al. (2010) found support that contextual factors affect followers' definition of followership as well as their behavior in the follower role. Using a similar approach to those taken in leadership perception research, Sy (2010) developed a measure of IFTs using a sample of workplace leaders to generate items. His findings support

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an18-item, 6-factor structure for IFTs: enthusiasm, industry, good citizen, conformity, insubordination, and incompetence. Subsequently, Sy (2010) found that IFTs were predictive of LMX quality. The positive dimensions of enthusiasm, industry, and good citizen loaded on a second-order "prototypical" dimension, while the negative dimensions of conformity, insubordination, and incompetence loaded onto a second-order "anti-prototypical" dimension.

Because a leader-follower relationship is reciprocal in nature, it is important to consider both partners' expectations regarding the role of the *follower* in the relationship (Lord & Maher, 1991; DeRue & Ashford, 2010; Shondrick & Lord, 2010). When a follower's behavior aligns with expectations for a follower held by the leader, the follower's behavior is interpreted similarly by both dyadic partners (Lord & Maher, 1991). This mutual understanding then positively influences the relationship quality between the leader and follower (van Gils et al., 2010; Shondrick & Lord, 2010). As such, IFTs are important because they set expectations for what a follower should do in a dyadic relationship and are used as a basis for how to interpret the behavior of an individual acting within the role of a follower (Lord & Maher, 1991; Shondrick & Lord, 2010).

## 1.4 - Inter-personal congruence on implicit theories

As previously mentioned, ILTs and IFTs both guide an individual's interpretation of their partner's behavior and serve as a foundation for one's own behavior (Lord & Maher, 1991; Shondrick & Lord, 2010). If ILTs and IFTs held by a follower are the same as those held by a leader, both dyadic partners behave in a way that is congruent with each other's expectations, thus enhancing relationship quality (Coyle & Foti, 2014; Engle & Lord, 1997; Lord & Maher, 1991; van Gils et al., 2010). There are several factors that can influence congruence or incongruence on implicit theories. Specifically, implicit theories may differ if: (1) leaders and followers have different prior experiences regarding leader and follower roles, (2) leaders and followers are subject to different contexts on a day-to-day basis, (3) leaders' and followers' goals differ from each other (van Gils et al., 2010). In a dyadic relationship, implicit theories may differ depending on whether partners believe they are meeting their own standards as well as their partner's standards (Lord et al., 1984; Van Gils et al., 2010). Furthermore, van Gils et al. (2010) posited that even if dyadic partners agree on *what* should be contributed by each partner, they could still disagree on *how much* should be contributed, suggesting that the extent to which

traits are displayed could further influence congruence or incongruence on implicit theories. Therefore, whether or not leaders and followers have congruent vs. incongruent implicit theories has a measureable effect on the exchange quality between leaders and followers.

In summary, congruence on ILTs and IFTs held by both dyadic partners is important for how both partners assess not only the LMX relationship, but other facets of relationship quality as well, including perceived support from one's partner, identification with this partner, and contribution to the relationship. Differences in ILTs and IFTs lead both members of the dyad to behave differently and interpret those behaviors differently (Engle & Lord, 1997; Gerstner & Day, 1997; Lord & Maher, 1991; Lord et al., 1984; Sin et al., 2009), which is why it is important to measure ILTs and IFTs held by *both* dyadic partners. Superior relationship quality, on the other hand, is achieved when the behavior of both dyadic partners aligns with expectations and both dyadic partners interpret it similarly (Coyle & Foti, 2014; Engle & Lord, 1997; Lord & Maher, 1991; Shondrick & Lord, 2010). The extent to which dyadic partners hold the *same implicit theories* leads both partners to view the relationship similarly, resulting in both partners subsequently rating LMX, support, identification, and contribution within the relationship highly (Coyle & Foti, 2014; Engle & Lord, 1997; van Gils et al., 2010). A conceptual model is presented in Figure 1. In this model, I predict the following:

*H1: Greater leader ILT-follower ILT congruence will be positively associated with leader perceptions of: LMX quality, identification with followers, support from followers, and leader contributions to the relationship.*

*H2: Greater leader ILT-follower ILT congruence will be positively associated with follower perceptions of: LMX quality, identification with leaders, support from leaders, and follower contributions to the relationship.*

*H3: Greater leader IFT-follower IFT congruence will be positively associated with leader perceptions of: LMX quality, identification with followers, support from followers, and leader contributions to the relationship.*

*H4: Greater leader IFT-follower IFT congruence will be positively associated with follower perceptions of: LMX quality, identification with leaders, support from leaders, and follower contributions to the relationship.*

**1.5 - Moderating Role of Self-Views**

  **Congruence on follower ILT and leader self-view.**  A leader-follower relationship involves a series of exchanges and negotiations as each partner perceives and evaluates both partners' roles in the relationship (DeRue, 2011; DeRue & Ashford, 2010; Dienesch & Liden, 1986; Gerstner & Day, 1997; Graen & Scandura, 1987; Graen & Uhl-Bien, 1995).  Interactions between dyadic partners serve to reinforce a leaders identity through internalization (DeRue, 2011; DeRue & Ashford, 2010; Epitropaki et al., 2013; DeRue, Ashford, & Cotton, 2009; Stryker & Burke, 2000).  Internalization is a state in which an individual incorporates a leader identity (e.g. formal, informal, or combination of both) as part of his/her self-concept (DeRue & Ashford, 2010; DeRue et al., 2009; Gecas, 1982).  This identity is asserted and ascertained over the course of interaction with a follower; suggesting identity as a leader is tied to the role occupied by that individual, (DeRue & Ashford, 2010; DeRue et al., 2009; Stryker & Burke, 2000).  This identity may or may not be formally assigned, as an informal identity as a leader is interlaced with formal leader roles assigned by a specific organization.  This role is then reciprocated by a dyadic partner in the role of a follower and the behavior of both partners is mutually recognized by both partners (DeRue & Ashford, 2010).

  Based on the work of Baldwin (1992), Epitropaki et al. (2013) developed a model in which a leader holds a self-view as a leader based on ILTs and holds a schema of his/her partner based on IFTs.  This model suggests that an ILT helps a leader identify with a formal role as a leader and guide interactions with a follower (DeRue & Ashford, 2010; Epitropaki et al., 2013).  A follower develops a schema of his/her leader based on an ILT as well (DeRue & Ashford, 2010; Epitropaki et al., 2013).  Subsequent interactions with leaders and behavior toward a leader are guided by ILTs.  Therefore, when investigating how a leader perceives dyadic interactions, one should consider the association between a leader's self-view and a follower's ILT.

  When a leader and a follower hold congruent ILTs, the leader sees himself/herself in the same manner that their follower sees him/her, and each partner's behavior is mutually understood (Lord & Maher, 1991).  In other words, the leader will claim a leader identity and grant a follower identity more strongly.  Thus, if a leader identifies with his/her role, this

identification is accompanied with the perception that he/she is embodying the traits and behaviors of a leader.  From this perspective, the perceived match between a leader's own traits and ILTs and identification as a leader are related.

Self-views provide a mechanism for understanding reciprocal interactions between leaders and followers (Lord, Brown, & Freiberg, 1999).  For leaders, reactions to one's own behavior may be based on comparison to self-relevant standards (Dunning & Hayes, 1996; Lord et al., 1999).  In the case where a leader's self-view aligns closely with his/her ILT, this similarity is more likely to be emphasized through dyadic interactions with followers (DeRue & Ashford, 2010; Lord & Maher, 1991).  Therefore, a leader is more likely to use ILTs when judging relationship quality (Engle & Lord, 1997; DeRue & Ashford, 2010; van Gils et al., 2010).  In this case, the relationship between congruence on ILTs and leader-assessed relationship quality will be stronger than when a leader's self-view and ILT do not align. Moderation is predicted such that relationship between congruence between both partners' ILTs and leader assessed relationship quality is stronger when the leader's self-view and follower's ILT align (Figure 1).

> *H5: Greater leader self-view - follower ILT congruence will moderate the relationship between leader ILT-follower ILT congruence and outcomes.  As leader self-view - follower ILT congruence increases, the positive relationship between leader ILT-follower ILT congruence and leader perceptions of LMX quality, identification with followers, support from followers, and contribution to the relationship will increase in strength.*

**Congruence on leader ILT and leader self-view.**  DeRue and Ashford (2010) proposed that if an individual perceives a match between his/her self-view and implicit theories he/she will be more likely to claim an identity as a leader or follower.  If a leader claims a leader identity more strongly, he/she is more likely to grant a follower identity to their partner, as leader-follower relationships are reciprocal (Lord & Maher, 1991; DeRue & Ashford, 2010; DeRue, 2011; Oc & Bashshur, 2013).  Identifying strongly with a leader role provides a foundation for evaluating whether or the leader is meeting his/her own expectations for traits and behaviors displayed by a leader in a working relationship (DeRue & Ashford, 2010; van Gils et al., 2010). Identifying with a leader role also provides a means to evaluate whether or not a leader's subordinate is meeting the leader's expectations for in-role traits and behaviors of a follower in a working relationship.

When a leader holds self-views that more closely align with relevant conceptual domain (e.g., leadership), sensitivity to the behavior of others in personally relevant domains (e.g., followership) increases (Engle & Lord, 1997; Markus, Smith, & Moreland, 1985). Hochwälder (1996) found evidence that self-schemas affect the processing of others' schema-consistent traits. Specifically, stronger relationships were found with familiar traits of others than unfamiliar traits of others when individuals were more self-schematic in a conceptually relevant domain. Because a leader believes he/she is meeting expectation for a leader and expects the same from a follower, categorization of followers becomes a relevant and appropriate domain to judge whether or not a follower is meeting the leader's expectations (DeRue & Ashford, 2010; Lord & Maher, 1991). It stands to reason that a leader with a self-view that closely aligns with his/her ILT is more likely to use an IFT when judging contributions to the relationship than a leader who's self-view does not closely align with leadership (Engle & Lord, 1997; DeRue & Ashford, 2010; Lord & Maher, 1991; van Gils et al., 2010). If the contribution is judged to fit the expectations of the leader, the leader is likely to rate the relationship quality greater (van Gils et al., 2010). Following from the van Gils et al. (2010) model, moderation is predicted such that congruence on IFTs and leader assessed relationship quality is stronger when a leader's self-views align with his/her own role expectations (Figure 1).

> H6: Greater leader self-view - leader ILT congruence will moderate the relationship
> between leader IFT-follower IFT congruence and outcomes. As leader self-view - leader
> ILT congruence increases, the positive relationship between leader IFT-follower IFT
> congruence and leader perceptions of LMX quality, identification with followers, support
> from followers, and contributions to the relationship will increase in strength.

**Congruence on leader IFT and follower self-view.** For a follower, interactions with a leader are an important source of self-referent feedback and help to reinforce the follower's identity as a follower (DeRue, 2011; DeRue & Ashford, 2010; Dienesch & Liden, 1986; Gerstner & Day, 1997; Graen & Scandura, 1987; Graen & Uhl-Bien, 1995; Lord et al., 1999). As such, one could argue that an identity as a follower is tied to the role occupied by that individual, just as with leader identities. Follower's responses to leaders are guided by self-regulatory structures tied to self-identities (Lord et al., 1999). Thus, dyadic interactions are important for followers as well as leaders because they help reinforce expectations for the traits and behaviors of a follower (DeRue & Ashford, 2010; Lord & Maher, 1991).

IFTs also serve to reinforce an individual's identity as a follower and, be extension, the traits and behaviors that should be displayed by a follower. Schemas allow a follower to construct and interpret leadership and grasp his/her own role in the leadership process consistently with his/her sense of self (Lord, 2008). As discussed by Epitropaki et al. (2013), a follower will form a self-view based on IFTs and forms a schema of his/her leader based on ILTs. A clearly defined IFT helps a follower identify with his/her role and guide interactions with a leader (DeRue & Ashford, 2010; Epitropaki et al., 2013). When investigating a follower's perceptions of interactions with a leader, examining the association between the follower's self-view and leader's IFT is important.

In a similar manner with ILTs, congruent IFTs held by dyadic partners will result in the follower seeing himself/herself in the same manner that their leader sees him/her, resulting in the mutual understanding of both partner's in-role behavior (Lord & Maher, 1991). From the follower's perspective, he/she will have granted a leader identity and claimed a follower identity more strongly. As a result, the follower will perceive that he/she is embodying the relevant traits and behaviors of a follower. A follower's reactions to a leader's behavior, as well as his/her own behavior, may be based on comparison with self-views as a follower (Dunning & Hayes, 1996; Lord et al., 1999). According to Lord et al. (1999) it is important for a leader to target his/her behavior toward the followers' self-identity to improve interactions between the pair. When a follower's self-view aligns closely with the IFT held by the follower, this similarity is more likely to be emphasized through dyadic interactions with leaders (DeRue & Ashford, 2010; Lord & Maher, 1991). As such, a follower is more likely to use IFTs when judging relationship quality (Engle & Lord, 1997; DeRue & Ashford, 2010; van Gils et al., 2010). Moderation is predicted such that the relationship between congruence on both partners' IFTs and follower assessed relationship quality is stronger when the follower's self-view and leader's ILT align (Figure 1).

> *H7: Greater follower self-view - leader IFT congruence will moderate the relationship between leader IFT-follower IFT congruence and outcomes. As follower self-view - leader IFT congruence increases, the positive relationship between leader IFT-follower IFT congruence and follower perceptions of LMX quality, identification with leaders, support from leaders, and contributions to the relationship will increase in strength.*

**Congruence on follower IFT and follower self-view.**  When a follower perceives a match between his/her IFT and self-view, he/she will believe obligations as a follower are being satisfied and will subsequently perceive to be contributing positively to the relationship (van Gils et al., 2010).  The follower will then be more likely to expect the leader to contribute positively to the relationship in a way that aligns with expectations (Lord & Maher, 1991; DeRue & Ashford, 2010).  As such, one must consider the role of ILTs in how a follower assesses interactions with a leader.

Followers who see themselves as contributing strongly to the relationship will use ILTs to judge relationship quality (DeRue & Ashford, 2010; Lord & Maher, 1991).  As with leaders, when a follower holds a self-view that more closely align with relevant conceptual domain, sensitivity to the behavior of others in personally relevant domains (e.g., leadership) increases (Engle & Lord, 1997; Hochwälder, 1996; Markus et al., 1985).  Because a follower believes he/she is meeting expectation for a leader and expects the same from a follower, categorization of leaders becomes a relevant and appropriate domain to judge whether or not a follower is meeting the leader's expectations (DeRue & Ashford, 2010; Lord & Maher, 1991).  Ehrhart (2012) found evidence that followers' self-concept influences the ways in which certain dimensions of followers' ILTs (dedication and sensitivity) are used to determine preference for certain leadership styles.  In other words, how followers view themselves was related to their representation of a leader and how they subsequently reacted to specific leadership styles.  It stands to reason that a follower with a self-view that closely aligns with IFTs is more likely to use his/her ILTs when judging the relationship than a follower whose self-view does not closely align with IFTs (Engle & Lord, 1997; DeRue & Ashford, 2010; Lord & Maher, 1991; van Gils et al., 2010).  If the contribution is judged to fit the expectations of the leader, the follower is likely to rate the relationship quality more highly (van Gils et al., 2010).  Following from the van Gils et al. (2010) model, moderation is predicted such that congruence on ILTs and follower assessed relationship quality is stronger when a follower's self-views aligns with his/her own role expectations (Figure 1).

> *H8: Greater follower self-view - follower IFT congruence will moderate the relationship between leader ILT-follower ILT congruence and outcomes.  As follower self-view - follower IFT congruence increases, the positive relationship between leader ILT-follower*

*ILT congruence and <u>follower</u> perceptions of LMX quality, identification with leaders, support from leaders, and follower contributions to the relationship will increase in strength.*

# Chapter 2 – Method

## 2.1 - Participants

884 (167 leaders and 717 followers) full-time working adults were recruited as participants using a combination of snowball sampling strategy (Goodman, 1961) and sampling within a mid-sized financial organization headquartered in the North-Eastern United States. Of these individuals, 684 participants were eliminated due to the inability to match their data to that of a dyadic partner. Specifically, 414 (46.83%) did not provide information regarding their dyadic partner and for 225 (25.45%) participants, their partner failed to complete the survey. This resulted in 245 participants, organized in to 142 leader-follower dyads, who were successfully matched to a dyadic partner. 184 (78 leaders and 106 followers) of these participants were recruited with snowball sampling, and 61 (25 leaders and 36 followers) participants were recruiting using organizational sampling.

Of the 103 leaders recruited for this study, 23 supervised multiple followers, who also participated in this study (mean = 2.70 followers per leader). While it was originally intended to include all of these dyads, intra-class correlation coefficients (ICCs) computed for all outcome variables (LMX, identification, support, and contribution from both the leader and follower perspective) were high (0.30 or above for 6 out of 8 outcome variables). Additional testing of the type 1 error rate, based on research done by Walsh (1947) and Barcikowski (1981), and taking into account group size, number of groups, alpha levels, and ICC's of both DV's and IV's using 1000 iterations, revealed several type 1 error rates above 0.05. As such, dependence of observations was judged to be affecting the type 1 error rate, and the decision was made to randomly choose one follower per leader for these 23 leaders.

The final sample size in this study was 103 (n $_{leader}$ = 103, n $_{follower}$ = 103) independent dyads. 78 of these dyads were collected using snowball sampling (Goodwin, 1961). 25 of these dyads were collected using organizational sampling. On average, participants (both leaders and followers) were 45.21 (SD = 11.30) years old and had 11.80 (SD = 10.05) years of tenure with their current organization. On average, leaders had 6.43 (SD = 7.35) years of experience in the role of a leader. 63 (30.58%) individuals reported employment in the public sector of the economy, 96 (46.60%) reported the private sector, and 13 (6.31%) reported the voluntary sector; 34 (16.51%) individuals did not report a sector of employment. The sample consisted of 79

(28.34%) men and 126 (61.17%) women; one person did not report gender (0.49%). To maintain rater anonymity, a limited amount demographic data (gender, age, tenure with the organization) was collected.

**2.2 – Procedure**

Data were collected from participants via an online survey using the Virginia Tech Qualtrics survey system. Both an organizational sampling procedure and a snowball sampling procedure were used.

**Organizational Sampling Procedure.** Participants were identified with a predetermined coding system developed using an organizational hierarchy chart (sanctioned and provided by the organization) with individualized survey links, so that participants did not have to provide their names or identifying information. This was done in order to increase the response rate and help ensure confidentiality. Because the proposed hypotheses required matching of supervisor and subordinate data, participants were asked to provide the first and last initial of their supervisor and/or supervisee. According to the organizational hierarchy, there are no duplicate names within branches or departments. Although this helped increase the overall response rate (70.00%), the response rate for participants who provided usable data was considerably lower (17.68%).

At the beginning of data collection, participants were prompted by the researcher and informed of their opportunity to participate in an online survey. They were also informed of an opportunity to participate in a follow-up survey four weeks later. This prompt took place in the form of an e-mail blast. Instructions, confidentiality information (see Appendix A), and contact information for the researcher were provided. Additionally, the executive team within the organization sent out an e-mail endorsing completion of the survey during working hours, in an effort to help acquire high quality data. Monetary incentives in the form of four $50 restaurant gift cards and a grand prize (Apple iPad) drawing were provided to individuals that agreed to participate. Each completed survey was regarded as one entry for each drawing.

For the first survey, participants were asked to fill out an informed consent, surveys of ILTs and IFTs, outcome variables, and a control variable. Specifically, leaders were asked to fill out surveys regarding their ILTs of typical leaders and themselves as leaders as well as their IFTs of typical followers. Followers were asked to fill out surveys regarding their ILTs of typical leaders, as well as their IFTs of typical followers and themselves as followers. The orders of the

measures, as well as the items within the measures, were randomized in order to prevent any order effects. Participants were then were asked to fill out surveys of their perspective of the LMX relationship, identification, perceived support, and contribution to the relationship. Again, the orders of the measures, as well as the items within the measures, were randomized. Finally, followers were asked to complete a measure of the control variable of communication frequency. Because many leaders had multiple subordinates, which could lead to inaccurate reporting of the data, only followers were asked this measure. Although leadership experience, education, gender, dyadic tenure, tenure as a leader, and age were also control variables of interest, this information was provided by the organization.

      **Snowball Sampling Procedure.** The snowball sampling procedure was carried following the close of the initial survey for the organizational sample. Participants were recruited by students in psychology classes at a large mid-Atlantic University. Specifically, students had the opportunity to earn extra credit in their class by recruiting full-time working adults reporting to a supervisor to fill out an online survey. Undergraduate students recruited participants using a carefully scripted protocol (Appendix B). Participants were entered into a random drawing to win 1 of 3 pre-paid iTunes gift cards in the amount of $10.00 for their participation.

      Participants contacted by undergraduate psychology students were asked to fill out an informed consent (see Appendix C), surveys of ILTs and IFTs, outcome variables, and control variables. Specifically, participants were asked to fill out surveys regarding their ILTs of typical leaders, as well as their IFTs of typical followers and themselves as followers. The orders of the measures, as well as the items within the measures, were randomized in order to prevent any order effects. Participants were then were asked to fill out surveys of their perspective of the LMX relationship, identification, perceived support, and contribution to the relationship. Again, the orders of the measures, as well as the items within the measures, were randomized. Finally, followers were asked to complete a measure of the control variable of communication frequency, as well as education, gender, dyadic tenure, and age. These participants were then asked to provide the name and e-mail address of their direct supervisor.

      These supervisors were then contacted directly by the researcher and asked to participate in a second survey using a carefully scripted protocol (Appendix D). Three business days later, one follow up message was sent (Appendix E); only one follow up was sent, in order to be

respectful to everyone's time. Supervisors were asked to fill out surveys regarding their ILTs of typical leaders, as well as themselves as leaders, and their IFTs of typical followers. The orders of the measures, as well as the items within the measures, were randomized in order to prevent any order effects. Supervisors were then were asked to fill out surveys of their perspective of the LMX relationship, identification, perceived support, and contribution to the relationship. Again, the orders of the measures, as well as the items within the measures, were randomized. Finally, demographic information was collected (leadership experience, education, age, gender, organizational tenure, tenure as a leader, and tenure with their follower).

**2.3 - Measures**

**ILTs.** ILTs were measured using the 21-item measure developed by Epitropaki and Martin (2004), based on the original 41-item scale developed by Offermann et al. (1994) to measure the traits prototypical of leaders. ILTs were measured using a check list. Both leaders and followers were asked to indicate whether 21 traits were of a typical leader, with no definition of each term provided by, checking in the box next to the item. The 21-item scale includes six sub-dimensions (sensitivity, intelligence, dedication, dynamism, tyranny, and masculinity) organized into one over-arching dimension (positive and negative traits). Epitropaki and Martin (2004) supported a second order factor structure of positive and negative traits. Kuder-Richardson 20 (KR-20) reliability, which is used for instances of binary data (Kuder & Richardson, 1937), for the six sub-dimensions is listed as follows: sensitivity (understanding, sincere, helpful; .71), intelligence (intelligent knowledgeable, educated, clever; .69), dedication (dedicated, hardworking, motivated; .57), dynamism (energetic, strong, dynamic; .47), tyranny (domineering, pushy, manipulative, loud, conceited, selfish; .68), and masculinity (masculine, male; .62). Over-all, these estimates demonstrate suspect reliability. Because of the support for the second-order factors of positive and negative traits, however, reliability was computed for all positive traits and all negative traits, in addition the six sub-dimensions. KR-20 reliability for the positive items (13 items: understanding, sincere, helpful, intelligent, knowledgeable, educated, clever, motivated, dedicated, hardworking, energetic, strong, dynamic) was .82. KR-20 reliability for the negative items (8 items: domineering, pushy, manipulative, loud, conceited, selfish, masculine, male) was .76. Although the negative items showed adequate reliability, only

the positive items were used to test the hypotheses in this study, as the negative items failed to show adequate reliability when asked about self-views as leaders. This measure appears in Appendix F.

**Leaders' Self-View.** Leaders' view of themselves as a leader was measured using the same 21-item measure developed by Epitropaki and Martin (2004), as previously described. Participants were asked to indicate whether 21 traits were of a typical leader, with no definition of each term provided by, checking in the box next to the item (Epitropaki & Martin, 2004). Only leaders completed this measure. Each trait was measured using the same checklist methodology previously described. Participants were asked to indicate whether they believe each trait was characteristic of themselves as a leader by checking in the box next to the item. KR-20 reliability for the six sub-dimensions is listed as follows: sensitivity (understanding, sincere, helpful; .65), intelligence (intelligent knowledgeable, educated, clever; .62), dedication (dedicated, hardworking, motivated; .57), dynamism (energetic, strong, dynamic; .57), tyranny (domineering, pushy, manipulative, loud, conceited, selfish; .17), and masculinity (masculine, male; .42). KR-20 reliability for the positive items (13 items: understanding, sincere, helpful, intelligent, knowledgeable, educated, clever, motivated, dedicated, hardworking, energetic, strong, dynamic) was .83. KR-20 reliability for the negative items (8 items: domineering, Pushy, Manipulative, Loud, Conceited, Selfish, Masculine, Male) was .31. Again, because only the positive items showed adequate reliability, only the positive items were used to test the hypotheses in this study. This measure appears in Appendix G.

**IFTs.** IFTs were measured using an 18-item scale by Sy (2010) to measure the traits prototypical of followers. Both leaders and followers were asked to indicate whether 21 traits were of a typical leader, with no definition of each term provided by, checking in the box next to the item (Sy, 2010). Both leaders and followers completed this measure. Each trait was measured using the same checklist methodology previously described. This scale includes six dimensions (industry, enthusiasm, good citizen, conformity, insubordination, and incompetence). As with ILTs, Sy (2010) confirmed a second-order factor structure of positive vs. negative traits. KR-20 reliability for the six sub-dimensions is listed as follows: industry (hardworking, productive, goes above and beyond; .75), enthusiasm (excited, outgoing, happy; .71), good citizen (loyal, reliable, team player; .72), conformity (easily influenced, follows trends, soft spoken; .68), insubordination (arrogant, rude, bad tempered; .49), and incompetence

(uneducated, slow, inexperienced; .46).  Because of the support for the second-order factors of positive and negative traits, reliability was also computed for all positive traits and all negative traits, in addition to the six sub-dimensions.  KR-20 reliability for the positive items (9 items: hardworking, productive, goes above and beyond, excited, outgoing, happy, loyal, reliable, team player) was .84.  KR-20 reliability for the negative items (9 items: easily influenced, follows trends, soft spoke, arrogant, rude, bad tempered, uneducated, slow, and inexperienced) was .64).  Because only the positive items showed adequate reliability, only the positive items were used to test the hypotheses in this study.  The positive items have been used without the presence of the negative items previously by Whiteley et al. (2012).  This measure appears in Appendix H.

   **Followers' Self-View.**  Followers' view of themselves as a follower was measured using the same 18-item by Sy (2010), as previously specified.  Participants were asked to indicate whether 21 traits were of a typical leader, with no definition of each term provided by, checking in the box next to the item.  Only followers completed this measure.  Each trait was measured using the same checklist methodology as previously described.  Participants were asked to indicate whether they believed each trait was characteristic of themselves as a follower by checking in the box next to the item.  KR-20 reliability for the sub-dimensions (except for incompetence) is listed as follows: industry (hardworking, productive, goes above and beyond; .81), enthusiasm (excited, outgoing, happy; .75), good citizen (loyal, reliable, team player; .73), conformity (easily influenced, follows trends, soft spoken; .56), and insubordination (arrogant, rude, bad tempered; .90).  Reliability could not be calculated for the incompetence sub-dimension (uneducated, slow, inexperienced) due to a negative average covariance among these items.  KR-20 reliability for the positive items (9 items: hardworking, productive, goes above and beyond, excited, outgoing, happy, loyal, reliable, team player) was .87.  KR-20 reliability is listed for the negative items (9 items: easily influenced, follows trends, soft spoke, arrogant, rude, bad tempered, uneducated, slow, and inexperienced) was .55.  Again, because only the positive items showed adequate reliability, only the positive items were used to test the hypotheses in this study.  This measure appears in Appendix I.

   **Schema Congruenc**e.  Congruence on ILTs, congruence on IFTs, and congruence between implicit theories and self-views were operationalized as the ratio of positive items checked by dyadic partners to the total positive items checked.  This decision was made after inspection of the data showed participants did think in terms of negative items, as reflected by

low endorsement rates. Thus, there was no way to get at congruence with these items. [1] For example, if a leader checked "hardworking" and "intelligent," indicating that only these two traits were part of his/her leader schema, and a follower checked "intelligent," indicating that only this characteristic was part of his/her leader schema, congruence was calculated as .5, representing that out of the two traits checked, both partners have only one in common.

**Relational outcome variables.** *Leader-Member Exchange.* Perceived LMX quality was measured using the 10 item LMX-SLX scale originally developed by Graen, Hui and Taylor (2004) specifically to assess both leader and follower perspectives of the exchange relationship (e.g., "My supervisor/subordinate has confidence in my ideas."). These items were measured on a 5-point scale with response options ranging from (1) *strongly disagree* to (5) *strongly agree*. Previous research has found that the scores on this measure demonstrate satisfactory psychometric properties including reliability (e.g., Graen, Hui & Taylor, 2006; Scherbaum, Naidoo, & Ferreter, 2007). For this measure, there are two distractor items (items 1 and 7); therefore, the remaining eight items were summed for each participant resulting in a possible range of scores from 8-40; higher scores signifying better quality LMX. Cronbach's alpha was .93 from the leader's perspective and .95 from the follower's perspective. This measure appears in Appendix J.

*Identification.* Leader/follower identification with their dyadic partner was assessed using a modified version of the six-item measure by Mael and Ashforth (1992) to measure social identification. Though originally intended for educational measurement (e.g., identification with a school), previous research has demonstrated this scale can be used to capture leader identification (Kark, Shamir, & Chen, 2003). A sample item from this scale is "My subordinate's/supervisor's successes are my successes." Participants were asked to indicate the extent to which they agree with each of the statements presented using a 7-point scale with response options ranging from (1) *strongly disagree* to (7) *strongly agree*. Cronbach's alpha was .70 from the leader's perspective and .82 from the follower's perspective. This measure appears in Appendix K.

*Support.* Perceived support from one's dyadic partner was assessed using the four-item measure by Ryan et al. (2012) (e.g., "My supervisor/subordinate has realistic expectations of my job performance."). As intended by the original authors, these items were measured on a 4-point scale with response options ranging from (1) *strongly disagree* to (4) *strongly agree*. The four

items were summed for each participant resulting in a possible range of scores from 4-16; higher scores signifying higher perceived support from the individual's partner. Cronbach's alpha was .85 from the leader's perspective and .87 from the follower's perspective. This measure appears in Appendix L.

*Contribution.* Willingness to contribute to the relationship was assessed using a three-item measure by Greguras and Ford (2006), based on an original two-item measure by Liden and Maslyn (1998) to measure contribution in leader-followers relationships (e.g., "I do work for my supervisor/subordinate that goes beyond what is specified in my job description."). Participants were asked to indicate the extent to which they agree each statement. These items were measured on a 5-point scale with response options ranging from (1) *strongly disagree* to (5) *strongly agree.* The three items were summed for each participant resulting in a possible range of scores from 3-15; higher scores signifying higher willingness to contribute to the relationship. Cronbach's alpha was .77 from the leader's perspective and .70 from the follower's perspective. This measure appears in Appendix M.

**Control variables.** Although demographic information collected was fairly limited, in order to reduce participant concerns regarding confidentiality, certain variables (e.g., age and dyadic tenure) were controlled for in an effort to be consistent with previous research on LMX (e.g., Erdogan & Enders, 2007; Vidyarthi, Erdogan, Anand, Liden, & Chaudry, 2014). Context-specific factors, such as communication frequency, could influence the quality of exchange relationships due to partners potentially developing a platform for mutual understanding. Specifically, Lord and Maher (1991) assert considerable interpersonal contact provides individuals with extra opportunities to observe the behavior of their dyadic partner and make inferences regarding their traits. Dyadic tenure and sample (e.g., organizational vs. snowball) were controlled for as well.

*Communication Frequency.* Communication frequency was measured using the 10-item measure developed by Vidyarthi et al. (2014) and Kacmar, Witt, Zivnuska and Gully (2003) to measure frequency of various communication between leaders and followers through various mediums of communication, such as e-mail and face-to-face contact (e.g., "How frequently do you communicate with your supervisor by text or instant messaging?"). These items were measured using 5-point response scale with response options ranging from (1) *less than once per month* to (5) *more than once per day.* The 10 items were summed resulting in a possible range

of scores from 10-50; higher scores signifying more frequent communication. Cronbach's alpha was .80 in this study. This measure appears in Appendix N.

## 2.4 - Statistical Analysis Plan

**Descriptive statistics, correlations, reliability and validity.** All data were organized, and all congruence indices were calculated using Microsoft Excel and SPSS version 22. Descriptive statistics, Cronbach's alpha estimates, and correlations among the variables were examined using SPSS.

Construct validity of the outcome variables was assessed using three confirmatory factor analysis (CFA) models. Specifically, a measurement model specifying all four outcome variables as separate constructs was specified and tested against alternative models specifying two latent factors (e.g., LMX and support as one factor, and identification and contribution as another factor) and one latent factor (e.g., all four constructs loading onto the same factor). Because the data were mostly normally distributed, manifest path models were carried out specifying a maximum likelihood (ML) estimation technique. Model fit was primarily evaluated using the $\chi^2$ statistic (Bollen, 1989), the comparative fit index (CFI) (Bentler, 1990), root mean square error of approximation (RMSEA) (Steiger, 1990; Steiger & Lind, 1980), and the standardized root mean square residual (SRMR) (Bentler, 1995), as recommended by Weston and Gore Jr. (2006). As the sample for this study was 206 individuals, and the number of items for the outcome variables totaled 23, the ratio of participants to adequate sample power for this model was achieved, with a ratio of 8.96:1 (Worthington & Whittaker, 2006).

While congruence on the manifest indicators (e.g. traits listed in the ILT and IFT scales) is important, congruence on these items may not necessarily indicate congruence on the latent factors of ILTs (e.g. sensitivity, intelligence, dedication, dynamism) and IFTs (e.g. industry, enthusiasm, good citizen). Exploring the latent factors of ILTs, leader self-views, IFTs, and follower self-views was important to gain insight regarding whether the participants were assessing these constructs in a similar way. Due to this curiosity regarding the latent structure of implicit theories, tests of construct validity were performed to assess whether or not congruence on the latent construct was achieved.

CFA models were also used to test construct validity for ILTs and leaders' self-view. Similar to Epitropaki and Martin (2005) two confirmatory factor analyses models were tested: (a) 12 different factors for the combined ILTs and leader self-view data set and (b) 6 factors,

hypothesizing that the items of the same dimensions of the two scales loaded on the exact same factor (e.g., the "sensitivity" items of the ILTs scale were hypothesized to load on the same factor as the "sensitivity" items of leaders' self-view). Epitropaki and Martin (2004), found that the 12-factor model provided better fit than the 6 factor model, suggesting ILTs and the leader self-view scales represent distinct constructs. Because the data in this study were in binary format, a robust weighted least square (WLSMV) estimate technique was used and all variables were specified as categorical (Flora & Curran, 2004). This method estimates a tetrachoric correlation matrix for factor extraction. Previous research by Flora and Curran (2004) suggests this technique is superior with regard to binary data vs. other estimation techniques (e.g., maximum likelihood).

Finally, means, standard deviations, and correlations were used to examine the linear relationships between the control variables, congruence indices, and outcome variables.

**Regression Analysis.** Due to the relatively low sample size (N = 103) in this study, assessment of the control variables was carried out prior to hypothesis testing. In order to assess the impact of the four control variables, these predictors were entered into eight regression equations (specifying leader and follower assessment of each of the four outcome variables of LMX, support, identification, and contribution). Any control variable significantly predicting an outcome variable, while holding the other predictors constant, was included in subsequent hypothesis testing.

**Manifest Path Analysis**. Manifest path analysis was the chosen analysis technique to test the hypotheses for this study, as it was important to model leader and follower assessments of relationship quality in the same model. When assessing the necessary power for structural models, model complexity must be considered (i.e., distribution of the data, use of latent variable modeling) (Hair, Black, Babin, Anderson, & Tatham, 2006). Several scholars have noted that the minimum ratio of units of analysis (e.g., individual, dyad) to freely estimated parameters is 5:1 (Bentler & Chou, 1987; Worthington & Whittaker, 2006). It should be noted that the most commonly recommended ratio is 10:1, with 15:1 potentially being necessary if data are non-normally distributed, (Bentler & Chou, 1987; 2001; Hair, et al., 2006; Kline, 2005; Worthington & Whittaker, 2006). Because the data in this study were mostly normally distributed (with only the follower's assessment of LMX being slightly non-normal with respect to skew), and because

no latent variables were specified, 5:1 was judged to be an acceptable level of statistical power. Because no more than 20 parameters were freely estimated per model, and because the number of dyads available for analysis was 103, this criterion was satisfied.

Given the data were mostly normally distributed, manifest path models were carried out specifying a ML estimation technique. Model fit was primarily evaluated using the $\chi^2$ statistic (Bollen, 1989) as a measure of absolute model fit, which directly assesses how well a model fits the observed data and are appropriate for testing model misspecification. As such, this was judged to be the most appropriate fit index, and was weighted most heavily, even though this is a stringent measure of model fit (Weston & Gore Jr., 2006). Because covariance matrices were fit almost perfectly, however, the model fit indices should be interpreted with caution. Additional reported indices of model fit include the CFI, RMSEA, and SRMR, as recommended by Weston and Gore Jr. (2006).

To test the hypotheses in this study, eight manifest path models were specified (2 models for each outcome variable of LMX, support, identification, and contribution). The first four models tested hypotheses 1 through 4 for each outcome variable specified. These four models were specified with leader ILT - Follower ILT congruence predicting both leader and follower assessments of the outcome variable specified (e.g., LMX), and leader IFT - Follower IFT congruence predicting both leader and follower assessments of the outcome variable specified (e.g., LMX). Additionally, any control variables significantly predicting the outcome variables were entered into this model as well. The fit of these models was then assessed, and the direct path coefficients were interpreted to determine the significance of the main effects.

The second four models tested hypotheses 5 through 8 for each outcome variable specified. Specifically, four *additional* models were fit in which leader self-view - follower ILT congruence, leader self-view - leader ILT congruence, and the proposed interactions, were entered as predictors of leader assessments of follower perceptions of LMX, perceived support from his/her follower, identification with his/her leader, and contributions to the relationship. Additionally, follower self-view - leader IFT congruence, follower self-view - follower IFT congruence, and the proposed interactions, were entered as additional predictors of follower assessments of leader perceptions of LMX, perceived support from his/her leader, identification

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with his/her leader, and contributions to the relationship.  The fit of these models was then assessed, and the direct path coefficients were interpreted to determine the significance of the interaction effects, in addition to the main effects, in order to test for moderation.

# Chapter 3 – Results

## 3.1 - Tests of construct validity

First, a CFA model was tested with the 13 positive items in the ILT scale (Epitropaki & Martin, 2004) to confirm the factor structure of ILT scale. In this model, all items loaded significantly onto their respective factors (standardized loadings ranging from .77 to .88 on the Sensitivity sub-scale, from .65 to .93 on the Intelligence sub-scale, from .70 to .76 on the Dedication sub-scale, and from .49 to .75 on the Dynamism sub-scale. The four factors were allowed to covary. The chi-square value for the overall model fit was non-significant, $\chi^2$ (59) = 68.78, $p$ >.05; $\chi^2$/df = 1.16, suggesting excellent fit between the hypothesized model and the data. Examination of other fit indices (Kline, 1998) indicated excellent model fit as well; CFI = .99, RMSEA = .03. Additionally, a second CFA, specifying the four factors loading onto a second-order factor of positive traits, was fit. The chi-square value for the overall model fit was non-significant, $\chi^2$ (61) = 77.06, $p$ >.05; $\chi^2$/df = 1.26, suggesting excellent fit between the hypothesized model and the data. Examination of other fit indices (Kline, 1998) indicated excellent model fit as well; CFI = .99, RMSEA = .04.

Table 1 presents CFA results for construct validity tests for the positive items of ILTs and leader self-views. For the model specifying 4 latent factors, sub-scale items from both the ILT scale and the leader self-view scale were allowed to load onto the same dimension (e.g., motivated, dedicated, hardworking, self-motivated, self-dedicated, and self-hardworking loading onto the Dedication sub-scale). The 4 factors were allowed to covary. The chi-square value for the overall model fit was significant, $\chi^2$ (293) = 343.39, $p$ <.05; $\chi^2$/df = 1.17, suggesting a lack of fit between the hypothesized model and the data. Examination of other fit indices (Kline, 1998), however, indicated acceptable model fit; CFI = .97, RMSEA = .03. The second model specified 8 latent factors. For this model, sub-scale items from the ILT scale and the leader self-view scale loaded on separate dimensions (e.g., motivated, dedicated, and hardworking loaded onto the Dedication sub-scale, while self-motivated, self-dedicated, and self-hardworking loaded onto the self-Dedication subscale). The 8 factors were allowed to covary. The chi-square value for the overall model fit was non-significant, $\chi^2$ (271) = 307.58, $p$ >.05; $\chi^2$/df = 1.13, suggesting excellent fit between the hypothesized model and the data. Examination of other fit indices (Kline, 1998) indicated acceptable model fit as well; CFI = .98, RMSEA = .03. Because both

models fit reasonably well, a chi-square difference test was conducted in order to determine if the model with 8 factors fit significantly worse than the model with 4 factors. The difference in chi-square was significant, at 35.81 ($\Delta$ df = 22, $p$ <.05), thus providing evidence that the 8 factor model fit significantly better than the 4 factor model. Therefore, it was determined that the leader self-view scale showed adequate construct validity in this study.

Tests of construct validity for IFTs and follower self-views were attempted but were unsuccessful. Based on previous research by Whiteley et al. (2012), which used only the positive 9 IFT items, a CFA model with these 9 items was specified; however, the standard errors could not be computed. As such, construct validity and congruence on the latent construct of IFTs and follower self-views could not be established. Therefore, all interpretation of IFT congruence must be interpreted as congruence on the manifest indicators (e.g. traits in the IFT scale).

Table 2 presents the over-all model fit statistics for the measurement models testing the construct validity of outcome variables LMX, identification, support, and contribution. The chi-square for the one factor model showed poor fit, $\chi^2$ (189) = 900.58, $p$ <.05; $\chi^2$/df = 4.76, suggesting lack of fit. Examination of other fit indices showed poor model fit as well; CFI = .73, RMSEA = .14, SRMR = .11. The chi-square for the two factor model was $\chi^2$ (188) = 900.47, $p$ <.05; $\chi^2$/df = 4.79, suggesting lack of fit. Examination of other fit indices showed poor model fit as well; CFI = .73, RMSEA = .14, SRMR = .11. The chi-square for the four factor model was significant: $\chi^2$ (183) = 326.70, $p$ <.05; $\chi^2$/df = 1.79; suggesting lack of fit, however, examination of other fit indices showed acceptable model fit; CFI = .94, RMSEA = .06, SRMR = .06. Thus, the outcome variables in this study were judged to have adequate construct validity.

## 3.2 - Descriptive Statistics and Correlations

Table 3 presents mean and standard deviations for the mean number of traits in common and the mean number of traits checked for all congruence calculations (both between dyadic partners, and within dyadic partners). Additionally, ratios for the mean traits in common vs. mean traits checked, mean traits in common vs. total traits possible, and mean traits checked vs. total traits possible are presented. As previously mentioned, both leaders and followers completed measures of both ILTs and IFTs, leaders filled out the leader self-view scale, and followers filled out the follower self-view scale. In general, ratios of the mean traits in common vs. mean traits checked were higher for ILT congruence calculations than IFT congruence

calculations. The mean percentage of traits in common for leader ILT - follower ILT congruence (45.76%, SD = 27.07%) was considerably lower than the percentage of total traits checked (86.38%, SD = 12.69%). This was the case for all congruence indices. Leader ILT - follower ILT congruence showed the highest mean percentage of traits checked (86.38%, SD = 12.69%), suggesting that both leaders and followers may vary with respect to their perceptions of typical leaders. Leader ILT - leader self-view showed the highest mean percentage of traits in common; 54.46%, SD = 28.00%, suggesting that leader's generally perceive themselves to match their perception of a typical leader. The mean percentage of traits in common for leader IFT - follower IFT congruence was (24.33%, SD = 25.00%). This was the lowest mean number of traits in common for all congruence indices, suggesting that leaders and followers varied widely with respect to their perception of a typical follower.

Table 4 presents means, standard deviations, correlations, and reliability coefficients for all control, independent, and dependent variables of interest in this study. The reliability (alpha) coefficients listed in table 4 demonstrate acceptable reliability for the scales used in this study. Although some control variables (gender, leadership experience, and education level) were not included in Table 4, it should be noted that no significant correlations were found between these variables and any outcome variables of interest for this study. Only dyadic tenure was significantly correlated with sample (snowball vs. organizational) (-0.28, $p < .05$). Significant correlations between sample, age, dyadic tenure, and communication frequency, however, further emphasize the importance of entering these variables as control variables for hypothesis testing. For example, communication frequency correlated significantly with leader-rated LMX (0.21, $p < .05$), and leader-rated support (0.23, $p < .05$). In a similar way, follower's age correlated significant with follower-rated LMX (-0.23, $p < .05$), and follower-rated support (-0.23, $p < .05$). Examination of the significant correlations between schema congruence variables (e.g., leader ILT – follower ILT congruence, leader IFT – follower IFT congruence) and outcome variables ranged from -0.25 to 0.29, showing small to moderate effect sizes. Notably, while leader ILT - leader self-view congruence correlated significantly with leader-rated LMX (0.21, $p < .05$), follower-rated LMX (0.28, $p < .05$), follower-rated identification (0.27, $p < .05$), and follower-rated contribution (0.21, $p < .05$), follower IFT - follower self-view congruence did not significantly correlate with any outcome variables, suggesting that similarity between how leaders perceive similarity between typical leaders and themselves has more of an impact on

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dyadic relationship outcomes than similarity between how followers perceive similarity between themselves and typical followers. While LMX and support were significantly correlated with many schema congruence variables, identification and contribution did not, suggesting schema congruence may more heavily affect outcome variables phrased from the perspective of perceptions of how one's dyadic partner assesses the relationship, rather than how the individual would assess the relationship. Finally, it should be noted that all leader-assessed outcome variables were significantly correlated with each other, and all follower-assessed outcome variables were significantly correlated with each other as well.

### 3.3 - Control Variables

Table 5 shows the results of the regression models used to test the effects of control variables sample (organization vs. snowball), age, dyadic tenure, and communication frequency, as they pertain to perceptions of outcome variables LMX, identification, support, and contribution. A series of regression analyses were conducted in order to evaluate these control variables. In this table, the results of eight standard regression analyses testing the effect of each variable on both the leader and follower assessments of each outcome are shown. The effects were assessed by examining the standardized $b$ coefficients, $R^2$, and $F$ associated with each term. For LMX (leader and follower rated) and support (leader and follower rated), only communication frequency ($b = 0.20$, -0.22, 0.22, and -0.28, respectively) emerged as a significant predictor, while controlling for the effects of sample, age, and dyadic tenure. For leader-rated identification and contribution, as well as follower-rated identification and contribution, no control variables emerged as significant predictors, while controlling for the effects of the other control variables. As such, the decision was made to include communication frequency in all path models predicting LMX and support and to include no control variables in all path models predicting identification and contribution.

### 3.4 - Hypotheses Testing

**LMX.** The results of the hypothesis testing with respect to LMX can be found in table 6. To test hypotheses 1 through 4, a single manifest path model was specified with leader ILT - follower ILT congruence predicting both leader and follower assessments of the outcome variable, as well as leader IFT - Follower IFT congruence predicting both leader and follower assessments of the outcome variable. Additionally, communication frequency was included, predicting both leader-rated LMX and follower-rated LMX. Due to the significant correlation

between leader-rated LMX and follower-rated LMX (0.36, $p < 0.01$), these variables were allowed to covary. Due to the just-identified nature of the model specified, no degrees of freedom were present, and thus, model fit could not be assessed.

According to Hoyle (2011), the estimates from freely estimated parameters in a just-identified model can be interpreted. In order to evaluate model fit, however, a second model specifying the model estimate for the covariance between leader-rated LMX and follower-rated LMX was specified (although estimates were not interpreted from this model). This was judged to be an acceptable strategy, given prior results specifying a significant relationship between leader and follower assessments of LMX (Gerster & Day, 1997; Sin et al., 2009) and that theory should be used to guide the decision of freely estimated parameters (Hoyle, 2011). The chi-square for this model was non-significant: $\chi^2(1) = 0$, $p > .05$. Other fit indices are listed as follows: CFI = 1.00, RMSEA = 0.00, SRMR = 0.00. Additionally, a CFA model specifying leader-rated LMX and follower-rated LMX as unrelated was fit and tested. The chi-square for this model was significant: $\chi^2(1) = 14.60$, $p > .05$. Other fit indices are listed as follows: CFI = 0.62, RMSEA = 0.36, SRMR = 0.07. Given the established relationship between leader and follower ratings of LMX (Gerstner & Day, 1997; Sin et al., 2009), this was expected.

*ILT congruence.* Hypothesis 1 predicted that greater leader ILT - follower ILT congruence would be positively associated with leader perceptions of LMX. Leader ILT - follower ILT congruence was significantly and positively related to leader-rated LMX ($b = 0.22$, $p < .01$), thus providing support for hypothesis 1. Hypothesis 2 predicted that greater leader ILT-follower ILT congruence would be positively associated with follower perceptions of LMX quality. Leader ILT - follower ILT congruence did not significantly predict follower-rated LMX ($b = 0.14$, $p > .05$). As such, hypothesis 2 was not supported.

*IFT congruence.* Hypothesis 3 predicted that greater leader IFT-follower IFT congruence would be positively associated with leader perceptions of LMX quality. Leader IFT - follower IFT congruence did not significantly predict leader-rated LMX ($b = 0.13$, $p > .05$). Thus, hypothesis 3 was not supported. Finally, hypothesis 4 predicted that greater leader IFT-follower IFT congruence would be positively associated with <u>follower</u> perceptions of LMX quality. Leader IFT - follower IFT congruence was significantly and positively related to follower-rated LMX ($b = 0.24$, $p < .05$), thus providing support for hypothesis 4.

*Moderators.* To test hypotheses 5 through 8, a manifest path model testing the relationships in the previous model was specified. Additionally, congruence on leaders' self-views and followers' ILTs, congruence on leaders' self-views and leaders' ILTs, congruence on followers' self-view and leaders' IFTs, congruence on followers' self-views and followers' IFTs, and the proposed interactions, were entered as additional predictors. As can be seen in table 6, none of the terms for model 2 were significant, and thus hypotheses 5 through 8 were not supported.

**Identification.** The results of the hypothesis testing with respect to identification can be found in table 7. In this model, leader and follower ratings of identification were not allowed to covary, due to the non-significant correlation between the two variables (0.02, $p > .05$).

*ILT and IFT Congruence.* As can be seen in table 7, none of the terms for model 1 were significant, and thus hypotheses 1 through 4 were not supported.

*Moderators.* To test hypotheses 5 through 8, a manifest path model testing the relationships in the previous model was specified. Additionally, congruence on leaders' self-views and followers' ILTs, congruence on leaders' self-views and leaders' ILTs, congruence on followers' self-view and leaders' IFTs, congruence on followers' self-views and followers' IFTs, and the proposed interactions, were entered as additional predictors.

Hypothesis 5 predicted that greater leader self-view - follower ILT congruence would moderate the relationship between leader ILT-follower ILT congruence and identification, such that as leader self-view - follower ILT congruence increased, the positive relationship between leader ILT-follower ILT congruence and leader perceptions of identification quality would increase in strength. Because neither follower ILT - leader self-view ($b = 0.03$, $p > .05$) or the interaction of this term with leader ILT - follower ILT congruence ($b = -0.15$, $p > .05$) significantly predicted leader-rated identification, hypothesis 5 was not supported. Hypothesis 6 predicted that greater leader self-view - leader ILT congruence would moderate the relationship between leader IFT-follower IFT congruence and identification, such that as leader self-view - leader ILT congruence increased, the positive relationship between leader IFT-follower IFT congruence and leader perceptions of identification quality would increase in strength. Because neither leader ILT - leader self-view congruence ($b = 0.19$, $p > .05$) or the interaction of this term with leader IFT - follower IFT congruence ($b = 0.02$, $p > .05$) significantly predicted leader-rated identification, hypothesis 6 was not supported. Hypothesis 7 predicted that greater follower self-

view - leader IFT congruence would moderate the relationship between leader IFT-follower IFT congruence and identification, such that as follower self-view -leader IFT congruence increased, the positive relationship between leader IFT-follower IFT congruence and follower perceptions of identification quality would increase in strength. Because neither leader IFT - follower self-view congruence ($b = 0.13$, $p >.05$) or the interaction of this term with leader IFT - follower IFT congruence ($b = 0.03$, $p >.05$) significantly predicted follower-rated identification, hypothesis 7 was not supported. Finally, hypothesis 8 predicted that greater follower self-view - follower IFT congruence would moderate the relationship between leader ILT-follower ILT congruence and identification, such that as follower self-view - follower IFT congruence increased, the positive relationship between leader ILT-follower ILT congruence and follower perceptions of identification quality would increase in strength. Although follower IFT - follower self-view congruence ($b = 0.01$, $p >.05$) did not significantly predict follower-rated identification, the interaction of this term with leader ILT - follower ILT congruence ($b = 0.20$, $p < .01$) was significantly and positive related follower-rated identification. As such, I found evidence that the relationship between leader IFT - follower IFT congruence and follower-rated identification increases in strength as follower IFT - follower self-view congruence increases. As such, hypothesis 8 was supported.

**Support.** The results of the hypothesis testing with respect to support can be found in table 8. Leader and follower ratings of identification were not allowed to covary, due to the non-significant correlation between the two variables ($0.06$, $p > .05$).

*ILT congruence.* Hypothesis 1 predicted that greater leader ILT - follower ILT congruence would be positively associated with leader perceptions of support. Leader ILT – follower ILT congruence was significantly and positively related to leader-rated support ($b = 0.20$, $p < .01$), thus providing support for hypothesis 1. Hypothesis 2 predicted that greater leader ILT-follower ILT congruence would be positively associated with follower perceptions of support quality. Leader ILT – follower ILT congruence did not significantly predict follower-rated support ($b = 0.04$, $p < .05$). As such, hypothesis 2 was not supported.

*IFT congruence.* Hypothesis 3 predicted that greater leader IFT-follower IFT congruence would be positively associated with leader perceptions of support quality. Leader IFT - follower IFT congruence did not significantly predict leader-rated support ($b = 0.03$, $p > .05$). Thus, hypothesis 3 was not supported. Finally, hypothesis 4 predicted that greater leader

IFT-follower IFT congruence would be positively associated with follower perceptions of support quality. Leader IFT - follower IFT congruence was significantly and positively related to follower-rated support ($b = 0.24$, $p < .05$), thus providing support for hypothesis 4.

*Moderators.* To test hypotheses 5 through 8, a manifest path model testing the relationships in the previous model was specified. Additionally, congruence on leaders' self-views and followers' ILTs, congruence on leaders' self-views and leaders' ILTs, congruence on followers' self-view and leaders' IFTs, congruence on followers' self-views and followers' IFTs, and the proposed interactions, were entered as additional predictors. As can be seen in table 8, none of the terms for model 2 were significant, and thus hypotheses 5 through 8 were not supported.

**Contribution.** The results of the hypothesis testing with respect to contribution can be found in table 9. Leader and follower ratings of identification were not allowed to covary, due to the non-significant correlation between the two variables ($0.11$, $p > .05$).

*ILT and IFT Congruence.* As can be seen in table 9, none of the terms for model 1 were significant, and thus hypotheses 1 through 4 were not supported.

*Moderators.* To test hypotheses 5 through 8, a manifest path model testing the relationships in the previous model was specified. Additionally, congruence on leaders' self-views and followers' ILTs, congruence on leaders' self-views and leaders' ILTs, congruence on followers' self-view and leaders' IFTs, congruence on followers' self-views and followers' IFTs, and the proposed interactions, were entered as additional predictors. As can be seen in table 9, none of the terms for model 2 were significant, and thus hypotheses 5 through 8 were not supported.

### 3.5 - Exploratory Analysis based on Scatter Plot

Given previous research by Coyle et al. (2014), who found evidence that implicit theories may be non-linearly related to LMX, it was prudent to examine the scatterplots of the data in order to visually inspect for non-linear association between schema congruence and LMX. While no other scatterplots revealed strong non-linear associations, the scatterplot depicting the association between leader ILT - follower ILT congruence and leader-rated LMX (figure 2) revealed a strong non-linear association. As such, exploratory hierarchical regression analyses, the results to which can be found in table 10, were conducted in order to test Hypothesis 1 and 5, with respect to the non-linear association between leader ILT - follower ILT congruence and

leader-rated LMX, using the following equation, as recommended by Aiken and west (1991): $Y = b_1X + b_2X^2 + b_3Z + b_4XZ + b_5X^2Z + c_o$. In step 1, communication frequency was entered in as control variables. In steps 2, leader ILT – follower ILT congruence (X) and leader IFT - follower IFT congruence were added to the model. In step 3, the quadratic term of leader ILT - follower ILT congruence $(X^2)$, was entered into the model. In steps 4, moderator term follower ILT – leader self-view (Z) was entered into the model. In steps 5 and 6, the linear $(X^2)$ and quadratic-by-linear $(X^2Z)$ interaction terms were entered into the model. This final term was examined in order to assess if the curvilinear relationship between leader ILT - follower ILT congruence and leader-rated LMX varies as a function of follower ILT - leader self-view congruence.

Entering the control variable of communication frequency revealed a significant equation ($\Delta R^2 = 0.05$, $p < .05$), and communication frequency was significantly and positively related to leader-rated LMX ($b = 0.36$, $p < .05$). In step 2, leader ILT - follower ILT congruence positive and significantly predicted leader-rated LMX ($b = 3.75$, $p < .05$), but leader IFT - follower IFT congruence did not ($b = 1.83$, $p > .05$). Entering these terms revealed a significant equation ($\Delta R^2 = 0.08$, $p < .05$). In step 3, the quadratic term of leader ILT - follower ILT congruence was entered into the equation. Leader ILT - follower ILT congruence squared did not significantly predict leader-rated LMX ($b = 10.08$, $p > .05$). In step 4, moderator term follower ILT - leader self-view congruence was entered into the model, however, this term did not significantly predict leader-rated LMX ($b = 3.26$, $p > .05$). In step 5, the linear interaction term was entered into the model, however, this term did not significantly predict leader-rated LMX ($b = -3.43$, $p > .05$). In step 6, the quadratic-by-linear interaction term was entered into the model. This term significantly and negatively predicted leader-rated LMX ($b = -69.96$, $p < .05$), and the equation accounted for a significantly greater proportion of variance in leader-rated LMX ($\Delta R^2 = 0.09$, $p < .001$). Thus, it was concluded that the non-linear relationship between leader ILT - follower ILT congruence and leader-rated LMX was moderated by follower ILT - leader self-view congruence.

Following this regression, separate regression analyses were conducted to test the simple curves for a curvilinear relationship between leader ILT - follower ILT congruence and leader-rated LMX for low (-1 SD below the mean) and high (+1 SD above the mean) levels of follower ILT - leader self-view congruence. Analyses were carried out using unstandardized regression

coefficients, as recommended by Aiken and West (1991). The unstandardized estimates revealed a significant curvilinear relationship between leader ILT - follower ILT congruence and leader-rated LMX at low levels of follower ILT - leader self-view congruence (b = 27.28, p < .01) but not for high levels of follower ILT – leader self-view congruence (b = -8.91, p > .05). While the curvilinear relationship between leader ILT - follower ILT congruence and leader-rated LMX is positive at low levels of follower ILT - leader self-view congruence, this curvilinear relationship is negative at high levels of follower ILT - leader self-view congruence. Figure 3 shows the plot of the two-way interaction effects between the curvilinear main effect of leader ILT - follower ILT congruence and linear moderator of follower ILT - leader self-view congruence on the dependent variable of leader-rated LMX.

# Chapter 4 – Discussion

## 4.1 - Summary of Findings

The purpose of this study was to examine how inter-personal congruence on ILTs and interpersonal congruence on IFTs affects both leaders' and followers' perspectives of relationship-oriented outcome variables (e.g., assessments of partner's perceptions of LMX, perceived support from one's dyadic partner, identification with dyadic partner, and perceptions of one's own contribution to the relationship). Congruence between self-views and role expectations held by both dyadic partners was examined as a moderator of these relationships. I found evidence that congruence on ILTs is related to leader-rated LMX and perceived support from followers, but not leader rated identification and contribution. In addition, there was evidence to support that congruence on IFTs was related to follower-rated LMX and perceived support from leaders, but not follower rated identification and contribution. Although I found evidence that congruence that follower IFT – follower self-view congruence moderated the relationship between leader ILT – follower ILT congruence and follower-rated identification, no other moderation hypotheses were supported. As such, this if effect is most likely a type 1 error, and the results should be interpreted with caution.

Despite the lack of supported linear moderation hypotheses, I discovered a non-linear relationship between congruence on leader expectations and leader-rated LMX quality, which was significantly moderated by congruence between role expectations of leaders held by a follower and a leader's self-view. Specifically, the curvilinear relationship between leader ILT – follower ILT congruence and leader-rated LMX is positive at high levels of follower ILT – leader self-view congruence, but was negative at low levels of follower ILT – leader self-view congruence. As a follower's expectations for a leader align with how a leader perceives himself/herself, high and low levels of congruence on leader expectations are more associated with high leader-assessed LMX. This moderation effect was not present for follower-rated LMX. Although this result was not predicted, it suggests that the relationship congruence on leader expectations and leader-rated LMX may be more complex than previously thought. This offers interesting possibilities for future research.

**4.2 - Contributions**

The results of this study show meaningful similarities and differences to existing literature on the role of interpersonal implicit theory congruence in LMX (e.g., Coyle & Foti, 2014; Engle and Lord, 1997). Coyle & Foti (2014) found that congruence on leader expectations significantly predicted both leader and follower-rated LMX, and that congruence on follower expectations significantly predicted leader-rated LMX, but not follower-rated LMX. The most notable similarity is that in both studies, congruence on leader expectations influenced how leaders assessed the relationship, emphasizing the importance of these cognitive structures for an individual in the role of a leader in a leader-follower working relationship. The most notable difference was that while Coyle & Foti (2014) found that congruence on follower expectations predicted leader-rated LMX, this study found evidence that congruence on follower expectations predicted *follower-rated* LMX, not leader-rated LMX. These differences in the results may be attributed to differences in the methodologies used. While Coyle & Foti (2014) conducted research in a laboratory setting, this study observed full-time working adults engaged in leader-follower relationships. As such, student followers may rely more heavily on expectations of their partner's role in their assessment of relationship quality, while working subordinates may rely more heavily on expectations of their own role (Shondrick & Lord, 2010). It is worth noting, however, that both studies used the same measures of ILTs and IFTs.

Engle and Lord (1997) found that congruent performance expectations significantly predicted supervisor rated LMX quality, but found that congruent leader expectations did not predict subordinate rated LMX quality. This study, however, found that congruent follower expectations did not significantly predict leader rated LMX quality, but congruent leader expectations did predict follower rated LMX quality. This discrepancy is interesting, as both studies were conducted in the field with full-time working adults. This difference may be attributable to the difference in scales used. While scales of leader expectations in both studies contained only positive items, the scale for this study were adopted from Epitropaki and Martin (2005), while Engle and Lord used traits originally based on those described by Lord et al. (1984). Additionally, Engle and Lord (1997) used a goal-derived measure of follower expectations (e.g., performance expectations), while this study used a central tendency measure of follower expectations. Given the difference in outcomes associated with this difference in measurement, the measurement of implicit theories should be re-examined. Specifically, the role

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of context in implicit theory measurement should be further explored and measurement techniques of implicit theories should be evaluated further, as called for by previous researchers (Coyle et al., 2014; Epitropaki et al., 2013; Medvedeff & Lord, 2007; Snead, Coyle, Foti & Diana, 2013; Sy, 2011).

From the leaders' perspective, congruence on leader expectations predicted LMX quality and perceived support from their followers. From the followers' perspective, congruence on follower expectations predicted LMX quality and perceived support from their leaders. These results make important contributions to literature on leader-follower relationships. First, this study corroborates previous research by Liden et al. (1993) and Epitropaki & Martin (2005), which showed differences in expectations for individuals in a leader role predicted LMX. This further emphasizes the importance of similarity between members in order to improve the relationship quality between leaders and followers (Erdogan & Bauer, 2014).

Additionally, there is evidence to suggest both ILTs and IFTs are predictive of perceived support in addition to LMX. Therefore, expectations may be meaningful to relationship quality beyond exchanges that take place between leaders and followers, building upon research that leader-follower relationships are multi-dimensional (Liden & Maslyn, 1998; Zhou & Schriesheim, 2009). Role expectations, however, were not predictive of identification with one's partner, or assessments of one's contribution to a relationship. It is possible congruence role expectations is more important with regard to outcomes specified from the perspective of one's dyadic partner (e.g., perceptions of what an individual's partner is willing to do in the relationship). This adds a meaningful perspective to previous research by Nahrgang, Morgeson, and Ilies (2009), who found personality characteristics influenced how LMX relationships developed over time. Cognitive expectations may indeed represent another important predictor of how individuals rate LMX.

Finally, these results reinforce the idea that relationship quality is assessed based on the role that one occupies in a relationship (Lord & Maher, 1991). In other words, whether or not individuals have similar expectations for the role that they hold is important for how that individual assesses the relationship (Shondrick & Lord, 2010; van Gils et al, 2009). This corroborates previous research by Bernerth, Armenakis, Field, Giles, and Walker (2008), who found similarity in personality characteristics influenced LMX quality. Examining the roles of

trait similarity in addition to congruence on expectations for leaders and followers may, indeed, be fruitful to examine from both dyadic partners' perspectives.

This study makes several contributions to current literature on ILTs and IFTs as well. First of all, it is one of few studies that empirically evaluates both leader and follower implicit theories from both leaders' and followers' perspective. I corroborated previous evidence that both leader prototypes and follower prototypes are useful in assessing relationship quality (Coyle & Foti, 2014; Engle & Lord, 1997). The results of this study, combined with previous research, suggest that both leaders and followers use role expectations for both their role and role held by their partner to assess relationship quality, but that some expectations may be relied upon more heavily, depending on the context (e.g., academic, professional).

**4.3 - Limitations and Future Research**

As with many field studies, there are some noteworthy limitations to this study. Specifically, the relatively low response rate limited the amount of dyads available for data analysis, thus calling into question the adequacy of the statistical power obtained to complete the analyses. Statistical power was further compromised by the removal of several dyads due to high ICC values. Despite meeting the minimum power requirements for CFA, it is possible lack of statistical power played a role in the inability to confirm the factor structure of IFTs and follower self-views. Although the power requirements were met for hypothesis testing, the possibility of a type one error, especially with regard to the moderation hypotheses, remained present.

The results of this study suggest exciting additional avenues for future research. Primarily, although congruence on ILTs and IFTs had an effect on relationship outcomes oriented from the perspective of how an individual believes his/her partner evaluates the relationship (LMX and support), this was not the case for relationship outcomes oriented from the perspective of how an individual evaluates the relationship from his/her own perspective (identification and contribution). Future research should evaluate whether this is the case for direct supervisors only or if this generalizes to leader-follower relationships at multiple levels. For example, it is possible congruence on implicit theories affects relationships with direct supervisors differently than supervisors at higher levels of an organization (Erdogen & Bauer, Self, Holt, & Schaninger, 2005). Additionally, research should focus more evaluating implicit theory congruence beyond intra-personal congruence between partners. Epitropaki and Martin

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(2005) demonstrated that intra-personal congruence (whether or not an individual's partner matches his/her implicit theory) is predictive of relationship quality. The use of pattern-oriented approaches to study implicit theories, as demonstrated by Foti et al. (2012), may also be a fruitful conceptual framework for examining congruence as well, as individuals that hold a certain ILT may be more likely to hold a specific IFT. Finally, future research should continue to examine the role of behavior as a mediator of these relationships, as Coyle and Foti (2014) found evidence that cooperation mediates the relationship between schema congruence and LMX. Specifically, examining behavior as a moderator of these relationships in newly formed dyads vs. long-term relationships may be fruitful and provide valuable information for leadership training.

**4.4 - Implications and Conclusions**

The results of this study have several implications that should not be overlooked. This study reinforces previous work demonstrating the importance of expectations in predicting relationship quality, which has been shown to increase job satisfaction, upward voice, organizational citizenship behavior (OCB), performance ratings, while decreasing conflict and turnover (Scandura & Graen, 1984; Graen et al., 2004; Liden et al., 2000; Liu, Tangirala, & Ramanujam, 2013). The breadth of these outcomes demonstrates that it is of critical importance for organizations to maintain high-quality LMX relationships, as the over-all health and profitability of an organization has been clearly linked to these outcomes (Scandura & Graen, 1984; Engle & Lord, 1997). While the definition of a typical leader varies from individual to individual, leadership training that emphasizes open communication regarding role expectations, perhaps through the use of frame-of-reference training, should be implemented in order to take advantage of this phenomenon (Foti et al., 2012; Hauenstein & Foti, 1989; Engle & Lord, 1997).

In conclusion, I provided evidence that congruent leader expectations is positively related to leaders' and followers' assessments of LMX quality and leaders' assessments of perceived support. Congruent follower expectations is positively related to followers' assessments of LMX quality and followers' assessments of perceived support. These results reveal interesting similarities and differences with previously literature regarding the effects of role expectations on relationship quality. While previous research has focused exclusively on the relationship between role expectations and LMX, these results suggest that role expectations are important to many aspects of interpersonal relationship quality perceptions. Additionally, I found evidence that the non-linear relationship between congruent leader expectations and leader-rated LMX

quality may be moderated by congruence on followers' leader expectations and leaders' self-view.  These results shed new light regarding the complexity of the processes underlying leaders' and followers' perceptions of relationship quality with their dyadic partners.

<h1 style="text-align:center">References</h1>

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Appendix A

Consent Form – Organizational Sample

Please read the following information. VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY Informed Consent for Participants in Research Projects Involving Human Subjects
Investigators(s): Dr. Roseanne Foti, Patrick T. Coyle

I. Purpose of this Research/Project: The purpose of this experiment is to explore characteristics of leadership and followership held by individuals as well as relationship quality between leaders and followers.

II: The Participant will be asked to complete a brief survey with questions composed of continuous rating scales as well as very brief follow up survey scheduled 4 weeks later. The participant will have the opportunity to complete this survey via Qualtrics. The Participant may choose not to answer any question and may withdrawal from the study at any point.

III. Risks - The only potential risk to the participants in this study would be discomfort. Should the participant feel uncomfortable at any time during the survey, he (she) can choose to skip questions or they can stop the survey at any time.

IV. Benefits - Participation in this study may help individuals recognize their prototypes of followers. Participants may request a summary of the results of this study by contacting the researcher, Patrick T. Coyle, coylep23@vt.edu, which will be available by Spring, 2015.

V. Extent of Anonymity and Confidentiality - The researchers will not release the results of the study to anyone other than individuals working on the project without written consent. The investigators listed at the top will be given access to the survey results in order to transcribe the data. All information given during this study will remain confidential. The survey will provide information from a wide array of participants from numerous organizations to ensure a large number of participants; therefore, individuals will not be identifiable from any information submitted in the study. All data will be kept confidential with only the researcher having access to the data. Answers from all identifying information will be used for matching purposes only and will be deleted promptly before any analysis takes place. These files may be accessible to the Virginia Tech Institutional Review Board and Human Subjects Committee, should an audit be required.

VI. Compensation - Participants will be entered into a drawing for one of several $10.00 VISA pre-paid gift cards, awarded each day for full completion of this survey. Additionally, each completed survey will qualify as one entry for the grand prize (iPad by apple). All prizes will be awarded via random drawing.

VII. Freedom to Withdraw - Your participation in this study is voluntary; you may discontinue your participation at any time without penalty. If for any reason you decide that you would like

to discontinue your participation, simply exit the survey. You may also return an incomplete survey to you if choose not to fully complete the study.

VIII. After reading this document, if you agree to the information stated, agree below and continue with the survey document.

IX. Who to Contact for Research Related Questions: For questions about the research itself, or to report any adverse effects during or following participation, please feel free to contact the Principal Investigator, Dr. Roseanne Foti, at rfoti@vt.edu; the Chair of the Human Subjects Committee, Dr. Dave Harrison, at dwh@vt.edu; the Chair of the Institutional Review Board at Virginia Tech, David M. Moore, at (540)-231-4991 or moored@vt.edu; or researcher, Patrick T. Coyle, at coylep23@vt.edu.

X. You must be 18 years of age or older may participate in this study.

Please check next to the statement you agree with:

I consent

I do not consent

Appendix B

Protocol for recruitment used by undergraduate students

Hello, My professor for _____ is conducting a study on leadership and followership as well as the relationship quality between leaders and followers.  I am eligible for extra credit for each full time working adult that I can recruit and you will be entered into a drawing for 1 of 3 $10 gift card for completion.  Would you be willing to take a 10 minute online survey?

Appendix C

Informed Consent – Snowball Sample

Please read the following information. VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY Informed Consent for Participants in Research Projects Involving Human Subjects.

Investigators(s): Dr. Roseanne Foti, Patrick T. Coyle

Purpose of this Research/Project: The purpose of this study is to explore characteristics of leadership and followership held by individuals as well as relationship quality between leaders and followers.

II: Participants will be asked to complete a brief survey with questions composed of continuous rating scales.  Participants will have the opportunity to complete this survey via Qualtrics. Participants may choose not to answer any question and may withdrawal from the study at any point.

III. Risks - The only potential risk to the participants in this study would be discomfort. Should the participant feel uncomfortable at any time during the survey, he (she) can choose to skip questions or they can stop the survey at any time.

IV. Benefits - Participation in this study may help individuals recognize their prototypes of leaders and followers. Participants may request a summary of the results of this study by contacting the researcher, Patrick T. Coyle, coylep23@vt.edu, which will be available by Spring, 2015.

V. Extent of Anonymity and Confidentiality - The researchers will not release the results of the study to anyone other than individuals working on the project without written consent. The investigators listed at the top will be given access to the survey results in order to transcribe the data. All information given during this study will remain confidential. The survey will provide information from a wide array of participants from the organization to ensure a large number of participants; therefore, individuals will not be identifiable from any information submitted in the study.  All data will be kept confidential with only the researcher having access to the data.  You will not be required to provide any identifying information.  All data will be held on a separate portable hard drive in a locked file cabinet only.  These files may be accessible to the Virginia Tech Institutional Review Board and Human Subjects Committee, should an audit be required.

VI. Compensation - Participants will be entered into a drawing for one of several $10.00 pre-paid gift cads.  All prizes will be awarded via random drawing.

VII. Freedom to Withdraw - Your participation in this study is voluntary; you may discontinue your participation at any time without penalty. If for any reason you decide that you would like to discontinue your participation, simply exit the survey. You may also return an incomplete survey to you if choose not to fully complete the study.

VIII. After reading this document, if you agree to the information stated, agree below and continue with the survey document.

IX. Who to Contact for Research Related Questions: For questions about the research itself, or to report any adverse effects during or following participation, please feel free to contact the Principal Investigator, Dr. Roseanne Foti, at rfoti@vt.edu; the Chair of the Human Subjects Committee, Dr. Dave Harrison, at dwh@vt.edu; the Chair of the Institutional Review Board at Virginia Tech, David M. Moore, at (540)-231-4991 or moored@vt.edu; or researcher, Patrick T. Coyle, at coylep23@vt.edu.

X. You must be 18 years of age or older may participate in this study. Please check next to the statement you agree with:

I consent

I do not consent

Appendix D

Initial contact e-mail to leaders

Dear XXXX,

Hello, my name is Patrick Coyle, and I am a graduate student in the Department of Psychology at Virginia Tech. My dissertation involves the study of relationship quality on the basis of perceptions of leaders and followers in organizations. I would like to ask for your assistance in completing a brief (approximately 10 minutes) survey regarding your employee, XXXX.

This evaluation will be received directly by me and will not be viewed by your employee or anybody else. Moreover, I would like to assure you that employees with a variety of perceptions of followers were selected for this research and their selection does not indicate that the employee exhibits any negative traits or perceptions.

While your input is greatly appreciated, your participation is completely voluntary. Should you decide not to participate, it will not negatively affect the outcome of the study, so do not feel compelled to participate if you do not want to. By completing this brief survey, you be entered into a random drawing for one of several $10.00 gift cards. In the event that you choose to decline, your employee will still be eligible for entry into this random drawing. The following link will take you directly to this brief survey:

SURVEY LINK

Thank you very much for considering participation in this research. Please e-mail me if you have any questions!

Cheers,
Patrick

Appendix E

Follow up e-mail to leaders

Good Morning!

The purpose of this message is just a brief follow up to my original e-mail!  As per my previous message, I would like to follow up in asking for your assistance in completing a brief survey, the link for this survey is listed below!  This survey is very important to my successful completion of my PhD, and your help is truly appreciated!

SURVEY LINK

To be respectful of your time, however, this will be my only follow up message.

Thank you very much,
Patrick

Appendix F

Implicit Leadership Theories Survey (Epitropaki & Martin, 2004)

<u>Please place a check in the box next to each trait listed if you believe that the trait is
characteristic of a typical **LEADER.**</u>

**Understanding**

**Sincere**

**Helpful**

**Intelligent**

**Knowledgeable**

**Educated**

**Clever**

**Motivated**

**Dedicated**

**Hardworking**

**Energetic**

**Strong**

**Dynamic**

**Domineering**

**Pushy**

**Manipulative**

**Loud**

**Conceited**

**Selfish**

**Masculine**

**Male**

Appendix G

Leader Self-View Survey (Epitropaki & Martin, 2004)

<u>Please place a check in the box next to each trait listed if you believe that the trait is</u>
<u>characteristic of **YOURSELF** as a **LEADER.**</u>

**Understanding**

**Sincere**

**Helpful**

**Intelligent**

**Knowledgeable**

**Educated**

**Clever**

**Motivated**

**Dedicated**

**Hardworking**

**Energetic**

**Strong**

**Dynamic**

**Domineering**

**Pushy**

**Manipulative**

**Loud**

**Conceited**

**Selfish**

**Masculine**

**Male**

Implicit Followership Theories Survey (Sy, 2010)

<u>Please place a check in the box next to each trait listed if you believe that the trait is characteristic of a typical **FOLLOWER.**</u>

**Hard Working**

**Productive**

**Goes Above and Beyond**

**Excited**

**Outgoing**

**Happy**

**Loyal**

**Reliable**

**Team Player**

**Easily Influenced**

**Follows Trends**

**Soft Spoken**

**Arrogant**

**Rude**

**Bad Tempered**

**Uneducated**

**Slow**

**Inexperienced**

Follower Self-View Survey (Sy, 2010)

<u>Please place a check in the box next to each trait listed if you believe that the trait is characteristic of a **YOURSELF** as a **FOLLOWER.**</u>

**Hard Working**

**Productive**

**Goes Above and Beyond**

**Excited**

**Outgoing**

**Happy**

**Loyal**

**Reliable**

**Team Player**

**Easily Influenced**

**Follows Trends**

**Soft Spoken**

**Arrogant**

**Rude**

**Bad Tempered**

**Uneducated**

**Slow**

**Inexperienced**

LMX-SLX Survey Leader-Member Exchange

For each of the ten questions, please indicate your level of agreement or disagreement by circling where appropriate for each question. The ten questions are as follows:

**1. My supervisor/subordinate is satisfied with my work.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

**2. My supervisor/subordinate will repay a favor.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

**3. My supervisor/subordinate would help me with my job problems.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

**4. My supervisor/subordinate will return my help.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

**5. My supervisor/subordinate has confidence in my ideas.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

**6. My supervisor/subordinate and I have a mutually helpful relationship.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

**7. My supervisor/subordinate has trust that I would carry my workload.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

**8. My supervisor/subordinate is one of my leaders.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

**9. My supervisor/subordinate has respect for my capabilities.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

**10. I have an excellent working relationship with my supervisor/subordinate.**
Strongly Disagree      Disagree      Don't know      Agree      Strongly Agree

Appendix K

Leader/Follower Identification Survey

Please indicate your level of agreement or disagreement by circling where appropriate for each question.

**1.  When someone criticizes my supervisor/subordinate, it feels like a personal insult.**
Strongly Disagree      Disagree      Slightly Disagree      Neutral      Slightly agree      Agree      Strongly Agree

**2.  I am very interested in what others think about my supervisor/subordinate.**
Strongly Disagree      Disagree      Slightly Disagree      Neutral      Slightly agree      Agree      Strongly Agree

**3.  When I talk about my supervisor/subordinate and I, I usually say "we" rather than "he/she."**
Strongly Disagree      Disagree      Slightly Disagree      Neutral      Slightly agree      Agree      Strongly Agree

**4. My supervisor's/subordinate's successes are my successes.**
Strongly Disagree      Disagree      Slightly Disagree      Neutral      Slightly agree      Agree      Strongly Agree

**5.  When someone praises my supervisor/subordinate, it feels like a personal compliment.**
Strongly Disagree      Disagree      Slightly Disagree      Neutral      Slightly agree      Agree      Strongly Agree

**6.  If somebody criticized my supervisor/subordinate, I would feel embarrassed.**
Strongly Disagree      Disagree      Slightly Disagree      Neutral      Slightly agree      Agree      Strongly Agree

Appendix L

Perceived Support from Dyadic Partner Survey

Please indicate your level of agreement or disagreement by circling where appropriate for each question.

**1. My supervisor/subordinate keeps me informed of things I need to do my job well.**
Strongly Disagree          Disagree          Agree          Strongly Agree

**2. My supervisor/subordinate has realistic expectations of my job performance.**
Strongly Disagree          Disagree          Agree          Strongly Agree

**3. My supervisor/subordinate recognizes when I do a good job.**
Strongly Disagree          Disagree          Agree          Strongly Agree

**4. My supervisor/subordinate is supportive when I have a work problem.**
Strongly Disagree          Disagree          Agree          Strongly Agree

Appendix M

Contribution to dyadic relationship Survey

<u>Please indicate your level of agreement or disagreement by circling where appropriate for each question.</u>

**1. I provide support and resources for my supervisor/subordinate that goes beyond what is specified in my job description.**
Strongly Disagree          Disagree          Don't know          Agree          Strongly Agree

**2. I am willing to apply extra efforts, beyond those normally required, to help my supervisor/subordinate meet his or her work goals.**
Strongly Disagree          Disagree          Don't know          Agree          Strongly Agree

**3. I do not mind working my hardest for my supervisor/subordinate.**
Strongly Disagree          Disagree          Don't know          Agree          Strongly Agree

Appendix N

Communication Frequency Survey

For each of the ten questions, please indicate how frequency of your communication with your supervisor (subordinate) using the following scale:

1. Less than once a month
2. Once or twice a month
3. Once or twice a week
4. Once a day
5. More than once a day

**1. Write memos to your supervisor?**

**2. Receive memos from your supervisor?**

**3. Initiate face-to-face conversations with your supervisor?**

**4. Have face-to-face conversations with your supervisor that were initiated by him or her?**

**5. Send your supervisor an electronic mail message?**

**6. Receive an electronic mail message from your supervisor?**

**7. Call your supervisor on the phone?**

**8. Receive phone calls from your supervisor?**

**9. Receive a text or instant message from your supervisor?**

**10. Send your supervisor a text or instant message?**

# Footnotes

[1] Schema Congruence was also calculated including both the positive and negative items, in order to assess any differences in the results.  A combination of correlation, hierarchical regression analysis, and manifest path analysis revealed only small differences in the correlations between the congruence variables and outcome variables and no differences in statistical significance for any of the predictive relationships in this study.

Table 1

*Overall fit indices for construct validity tests of ILTs and leader self-views*

| Model | χ2 | df | χ2/df | Δχ 2 | Δ df | CFI | RMSEA |
|---|---|---|---|---|---|---|---|
| Null | 1914.37 | 325 | 5.89 | | | | |
| 4 Factor | **343.39** | **293** | **1.17** | **1570.98\*** | **32** | **.97** | **.03** |
| 8 Factors | **307.58** | **271** | **1.13** | **35.81\*** | **22** | **.98** | **.03** |

*Note.* N = 206. Numbers in bold indicate acceptable fit indices. CFI = comparative fit index. TLI = Tucker-Lewis index. RMSEA = root mean square of approximation. * *p* < .05.

Table 2

*Overall fit indices for measurement model of outcome variables*

| Model | $\chi^2$ | df | $\chi^2$/df | $\Delta\chi^2$ | $\Delta$ df | CFI | RMSEA | SRMR |
|---|---|---|---|---|---|---|---|---|
| Null | 2882.13 | 210 | | | | | | |
| 1 Factor | 900.58 | 189 | 4.76 | 1981.55* | 21 | .73 | .14 | .11 |
| 2 factors | 900.47 | 188 | 4.79 | .09 | 1 | .73 | .14 | .11 |
| 4 Factors | 326.70 | 183 | **1.79** | **573.77*** | **5** | **.94** | **.06** | **.06** |

*Note.* N = 206. Numbers in bold indicate acceptable fit indices. CFI = comparative fit index. TLI = Tucker-Lewis index. RMSEA = root mean square of approximation. SRMR = Standardized root mean square residual.  * $p < .05$.

Table 3

*Descriptive statistics for total traits in common, total traits checked and total possible traits*

| Congruence Variable | Mean traits in common | Mean traits checked | Traits in common / traits checked | Traits in common / traits possible | Traits checked / traits possible |
|---|---|---|---|---|---|
| Leader's ILT – Follower's ILT | 5.95 (2.25) | 11.23 (1.65) | 52.98 % | 45.76 % | 86.38 % |
| Leader's ILT – Leader's Self-View | 7.08 (3.64) | 10.15 (2.71) | 69.75 % | 54.46 % | 78.08 % |
| Follower's ILT – Leader's Self-View | 5.81 (3.33) | 11.13 (2.05) | 52.20 % | 44.69 % | 85.62 % |
| Leader's IFT – Follower's IFT | 2.19 (2.25) | 5.76 (2.22) | 38.02 % | 24.33 % | 64.00 % |
| Leader's IFT – Follower's Self-View | 2.95 (2.53) | 6.55 (2.14) | 45.04 % | 32.78 % | 72.78 % |
| Follower's IFT – Follower's Self-View | 3.40 (2.61) | 6.80 (2.61) | 50.00 % | 37.78 % | 75.56 % |

*Note.* N = 103, except for Leader's ILT – Follower's ILT congruence (n=100). ILT = Implicit Leadership Theory. IFT = Implicit Followership Theory. Congruence was calculated by dividing the traits in common by the total traits checked for each pair.

Table 4

*Means, standard deviations, correlations and reliability coefficients for dyadic variables*

| | | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Control** | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Sample | 0.24 | 0.43 | - | | | | | | | | | | | | | | | | | | |
| 2 | Leader's Age | 47.52 | 10.34 | -0.02 | - | | | | | | | | | | | | | | | | | |
| 3 | Follower's Age | 45.67 | 30.25 | -0.06 | 0.03 | - | | | | | | | | | | | | | | | | |
| 4 | Dyadic Tenure | 4.56 | 5.27 | -0.28** | .27** | 0.29** | - | | | | | | | | | | | | | | | |
| 5 | Communication Frequency | 31.00 | 24.30 | -0.07 | -0.02 | -0.09 | -0.02 | (0.80) | | | | | | | | | | | | | | |
| **Congruence** | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Leader's IFT – Follower's IFT | 0.35 | 0.32 | -0.13 | 0.11 | -0.09 | 0.07 | -0.03 | - | | | | | | | | | | | | | |
| 7 | Leader's ILT – Follower's ILT | 0.52 | 0.27 | -0.17 | 0.00 | -0.07 | 0.16 | 0.12 | 0.32** | - | | | | | | | | | | | | |
| 8 | Leader's ILT – Leader's Self | 0.65 | 0.27 | 0.04 | 0.10 | 0.07 | 0.23* | -0.01 | 0.29** | 0.48** | - | | | | | | | | | | | |
| 9 | Follower's IFT – Follower's Self | 0.45 | 0.35 | -0.05 | -0.07 | 0.07 | -0.04 | -0.03 | 0.42** | 0.14 | 0.00 | - | | | | | | | | | | |
| 10 | Leader's IFT – Follower's Self | 0.40 | 0.31 | -0.25* | 0.21* | -0.15 | 0.13 | -0.01 | 0.66** | 0.35** | 0.29** | 0.27** | - | | | | | | | | | |
| 11 | Follower's ILT – Leader's Self | 0.50 | 0.26 | -0.18 | 0.02 | -0.06 | 0.16 | 0.08 | 0.31** | 0.79** | 0.52** | 0.17 | 0.42** | - | | | | | | | | |
| **Dependent** | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Leader-rated LMX | 34.49 | 4.65 | -0.24* | 0.11 | -0.16 | 0.23* | 0.21* | 0.19 | 0.28** | 0.21* | 0.04 | 0.26** | 0.29** | (0.92) | | | | | | | |
| 13 | Follower-rated LMX | 34.79 | 5.77 | -0.11 | -0.02 | -0.23* | 0.16 | -0.19 | 0.29** | 0.19 | 0.28** | 0.13 | 0.26** | 0.26** | 0.36** | (0.95) | | | | | | |
| 14 | Leader-rated Identification | 33.05 | 5.00 | 0.00 | 0.05 | 0.05 | 0.00 | 0.02 | 0.02 | -0.02 | 0.11 | -0.05 | 0.12 | 0.03 | 0.31** | 0.00 | (0.78) | | | | | |
| 15 | Follower-rated Identification | 28.49 | 6.96 | -0.04 | 0.09 | 0.05 | 0.19 | -0.10 | 0.06 | 0.06 | 0.27** | 0.01 | 0.13 | 0.13 | 0.32** | 0.40** | 0.02 | (0.82) | | | | |
| 16 | Leader-rated Support | 13.33 | 1.83 | -0.25* | 0.15 | -0.02 | 0.21* | 0.23* | 0.09 | 0.24* | 0.16 | 0.01 | 0.20* | 0.20* | 0.80** | 0.21* | 0.24* | 0.28** | (0.85) | | | |
| 17 | Follower-rated Support | 13.71 | 2.19 | -0.02 | -0.01 | -0.23* | 0.01 | -0.25* | 0.26* | 0.08 | 0.18 | 0.17 | 0.20* | 0.19 | 0.17 | 0.65** | -0.11 | 0.38** | 0.06 | (0.88) | | |
| 18 | Leader-rated Contribution | 12.29 | 2.08 | 0.11 | -0.01 | -0.01 | -0.03 | -0.02 | -0.03 | -0.02 | 0.15 | 0.10 | 0.04 | 0.06 | 0.26* | -0.03 | 0.27** | 0.12 | 0.26* | 0.02 | (0.82) | |
| 19 | Follower-rated Contribution | 13.32 | 1.60 | -0.20* | -0.04 | 0.03 | 0.12 | 0.04 | 0.08 | 0.18 | 0.21* | 0.05 | 0.20* | 0.18 | 0.30** | 0.37** | 0.06 | .32** | 0.24* | 0.36** | 0.11 | (0.70) |

*Note.* N = 103, except for Leader's Age (n=98) and dyadic tenure (n=98). Cronbach's alpha coefficients are listed in parentheses. ILT = Implicit Leadership Theory. IFT = Implicit Followership Theory. LMX = Leader Member Exchange. Self = Self-view.

*p* < .05

**p* < .01.

Table 5

*Results of regression analyses of control variables*

| Dependent Variables | | $b$ | $R^2$ | $F$ |
|---|---|---|---|---|
| **LMX** | | | | |
| Leader: | Sample | -0.18 | | |
| | Age (leader) | 0.04 | | |
| | Dyadic Tenure | 0.18 | | |
| | Communication Frequency | 0.20* | 0.13 | 3.33* |
| Follower: | Sample | -0.09 | | |
| | Age (follower) | -0.07 | | |
| | Dyadic Tenure | 0.15 | | |
| | Communication Frequency | -0.22* | 0.08 | 1.99 |
| **Identification** | | | | |
| Leader: | Sample | 0.02 | | |
| | Age (leader) | 0.06 | | |
| | Dyadic Tenure | -0.01 | | |
| | Communication Frequency | 0.02 | 0.01 | 0.12 |
| Follower: | Sample | 0.02 | | |
| | Age (follower) | 0.05 | | |
| | Dyadic Tenure | 0.18 | | |
| | Communication Frequency | -0.09 | 0.05 | 1.21 |
| **Support** | | | | |
| Leader: | Sample | -0.19 | | |
| | Age (leader) | 0.10 | | |
| | Dyadic Tenure | 0.14 | | |
| | Communication Frequency | 0.22* | 0.14 | 3.73** |
| Follower: | Sample | -0.04 | | |
| | Age (follower) | -0.04 | | |
| | Dyadic Tenure | 0.00 | | |
| | Communication Frequency | -0.28** | 0.08 | 1.99 |
| **Contribution** | | | | |
| Leader: | Sample | 0.10 | | |
| | Age (leader) | -0.01 | | |
| | Dyadic Tenure | -0.02 | | |
| | Communication Frequency | -0.02 | 0.02 | 0.36 |
| Follower: | Sample | -0.16 | | |
| | Age (follower) | -0.05 | | |
| | Dyadic Tenure | 0.09 | | |
| | Communication Frequency | 0.03 | 0.04 | 1.05 |

*Note*. N = 103. Standardized regression coefficients are reported.  Sample was coded as follows: 0 = snowball sample, 1 = organizational sample.
* $p ≤ .05$
** $p < .01$

Table 6

*Standardized path model estimates for outcome variable leader-member exchange (LMX)*

| Dependent Variables | Model 1 | Model 2 |
|---|---|---|
| **Leader-rated LMX** | | |
| Communication Frequency | 0.19* | 0.20* |
| Leader ILT – Follower ILT Congruence | 0.22* | 0.15 |
| Leader IFT – Follower IFT Congruence | 0.13 | 0.09 |
| Leader ILT – Leader Self-View Congruence | | 0.04 |
| Follower ILT – Leader Self-View Congruence | | 0.09 |
| Leader ILT – Follower ILT  x  Follower ILT – Leader Self-View | | 0.08 |
| Leader IFT – Follower IFT  x  Leader ILT – Leader Self-View | | 0.13 |
| **Follower-rated LMX** | | |
| Communication Frequency | -0.20* | -0.19* |
| Leader ILT – Follower ILT Congruence | 0.14 | 0.14 |
| Leader IFT – Follower IFT Congruence | 0.24* | 0.19 |
| Follower IFT – Follower Self-View Congruence | | 0.07 |
| Leader IFT – Follower Self-View Congruence | | 0.03 |
| Leader IFT – Follower IFT  x  Leader IFT – Follower Self-View | | -0.04 |
| Leader ILT – Follower ILT  x  Follower IFT – Follower Self-View | | 0.08 |
| | | |
| With Leader-rated LMX | 0.36*** | 0.36*** |

*Notes*. N = 103. Standardized estimates are reported.  Model 1 fit: $\chi^2 (0) = 0.00$; CFI = 1.00; RMSEA = 0.00; SRMR = 0.00.  Model 2 fit: $\chi^2 (8) = 9.43$; CFI = 0.96; RMSEA = 0.04; SRMR = 0.03.  Leader and follower assessments were allowed to co-vary.
* $p \leq .05$
** $p < .01$
*** $p < .001$

Table 7

*Standardized path model estimates for outcome variable identification with dyadic partner*

| Dependent Variables | Model 1 | Model 2 |
|---|---|---|
| **Leader-rated Identification** | | |
| Leader ILT – Follower ILT Congruence | -0.03 | -0.14 |
| Leader IFT – Follower IFT Congruence | 0.03 | -0.02 |
| Leader ILT – Leader Self-View Congruence | | 0.19 |
| Follower ILT – Leader Self-View Congruence | | 0.03 |
| Leader ILT – Follower ILT   x   Follower ILT – Leader Self-View | | -0.15 |
| Leader IFT – Follower IFT   x   Leader ILT – Leader Self-View | | 0.02 |
| **Follower-rated Identification** | | |
| Leader ILT – Follower ILT Congruence | 0.05 | 0.05 |
| Leader IFT – Follower IFT Congruence | 0.04 | -0.06 |
| Follower IFT – Follower Self-View Congruence | | 0.01 |
| Leader IFT – Follower Self-View Congruence | | 0.13 |
| Leader IFT – Follower IFT   x   Leader IFT – Follower Self-View | | 0.03 |
| Leader ILT – Follower ILT   x   Follower IFT – Follower Self-View | | 0.20* |

*Notes*. N = 103. Standardized estimates are reported.  Model 1 fit: $\chi^2 (1) = 0.21$; CFI = 1.00; RMSEA = 0.00; SRMR = 0.00.  Model 2 fit: $\chi^2 (9) = 16.46$; CFI = 0.00; RMSEA = 0.09; SRMR = 0.03.  Leader and follower assessments were not allowed to co-vary.
* $p \leq .05$

Table 8

*Standardized path model estimates for outcome variable perceived support from partner*

| Dependent Variables | Model 1 | Model 2 |
|---|---|---|
| **Leader-rated Support** | | |
| Communication Frequency | 0.21* | 0.22* |
| Leader ILT – Follower ILT Congruence | 0.20* | 0.16 |
| Leader IFT – Follower IFT Congruence | 0.03 | -0.03 |
| Leader ILT – Leader Self-View Congruence | | 0.12 |
| Follower ILT – Leader Self-View Congruence | | 0.01 |
| Leader ILT – Follower ILT   x   Follower ILT – Leader Self-View | | 0.04 |
| Leader IFT – Follower IFT   x   Leader ILT – Leader Self-View | | 0.16 |
| **Follower-rated Support** | | |
| Communication Frequency | -0.25*** | -0.25*** |
| Leader ILT – Follower ILT Congruence | 0.04 | 0.03 |
| Leader IFT – Follower IFT Congruence | 0.24* | 0.17 |
| Follower IFT – Follower Self-View Congruence | | 0.08 |
| Leader IFT – Follower Self-View Congruence | | 0.05 |
| Leader IFT – Follower IFT   x   Leader IFT – Follower Self-View | | 0.00 |
| Leader ILT – Follower ILT   x   Follower IFT – Follower Self-View | | 0.07 |

*Notes.* N = 103. Standardized estimates are reported.  Model 1 fit: $\chi^2 (1) = 1.09$; CFI = 1.00; RMSEA = 0.03; SRMR = 0.00.  Model 2 fit: $\chi^2 (9) = 10.55$; CFI = 0.91; RMSEA = 0.04; SRMR = 0.02.  Leader and follower assessments were not allowed to co-vary.
* $p \leq .05$
** $p < .01$
*** $p < .001$

Table 9

*Standardized path model estimates for outcome variable contribution to the relationship*

| Dependent Variables | Model 1 | Model 2 |
|---|---|---|
| **Leader-rated Contribution** | | |
| Leader ILT – Follower ILT Congruence | 0.00 | -0.20 |
| Leader IFT – Follower IFT Congruence | -0.03 | -0.13 |
| Leader ILT – Leader Self-View Congruence | | 0.27* |
| Follower ILT – Leader Self-View Congruence | | 0.11 |
| Leader ILT – Follower ILT   x   Follower ILT – Leader Self-View | | -0.09 |
| Leader IFT – Follower IFT   x   Leader ILT – Leader Self-View | | 0.15 |
| **Follower-rated Contribution** | | |
| Leader ILT – Follower ILT Congruence | 0.17 | 0.15 |
| Leader IFT – Follower IFT Congruence | 0.03 | -0.11 |
| Follower IFT – Follower Self-View Congruence | | 0.02 |
| Leader IFT – Follower Self-View Congruence | | 0.21 |
| Leader IFT – Follower IFT   x   Leader IFT – Follower Self-View | | 0.02 |
| Leader ILT – Follower ILT   x   Follower IFT – Follower Self-View | | 0.09 |

*Notes*. N = 103. Standardized estimates are reported.  Model 1 fit: $\chi^2 (1) = 1.37$; CFI = 0.00; RMSEA = 0.06; SRMR = 0.03.  Model 2 fit: $\chi^2 (9) = 8.91$; CFI = 1.00; RMSEA = 0.00; SRMR = 0.02.  Leader and follower assessments were not allowed to co-vary.
\* $p ≤ .05$

Table 10

*Results of non-linear regression analyses for outcome variable leader-rated LMX*

| Dependent Variables | Entry β | Final β | $\Delta R^2$ | $\Delta F$ | $R^2$ | Adj. $R^2$ | F |
|---|---|---|---|---|---|---|---|
| **Leader-Rated LMX** | | | | | | | |
| Step 1: Communication Frequency | 0.36 | 0.03 | 0.05 | 4.74* | | | |
| Step 2: ILT | 3.75* | 4.79 | | | | | |
|       IFT | 1.83 | 2.60 | 0.08 | 4.63* | | | |
| Step 3: ILT $^2$ | 10.08 | 9.18 | 0.03 | 3.26 | | | |
| Step 4: Follower ILT – Leader Self | 3.26 | 10.00** | 0.01 | 1.42 | | | |
| Step 5: ILT x Follower ILT – Leader Self | -3.43 | -1.49 | 0.00 | 0.14 | | | |
| Step 6: ILT x Follower ILT – Leader Self $^2$ | -69.96*** | -69.96*** | 0.09 | 11.99*** | 0.26 | 0.21 | 4.80*** |

*Note*. N = 103. Unstandardized regression coefficients are reported. All predictor variables in steps 2 through 4 represent congruence variables. $\Delta R^2$ refers to the change in explained variance attributable to the inclusion of the term listed.
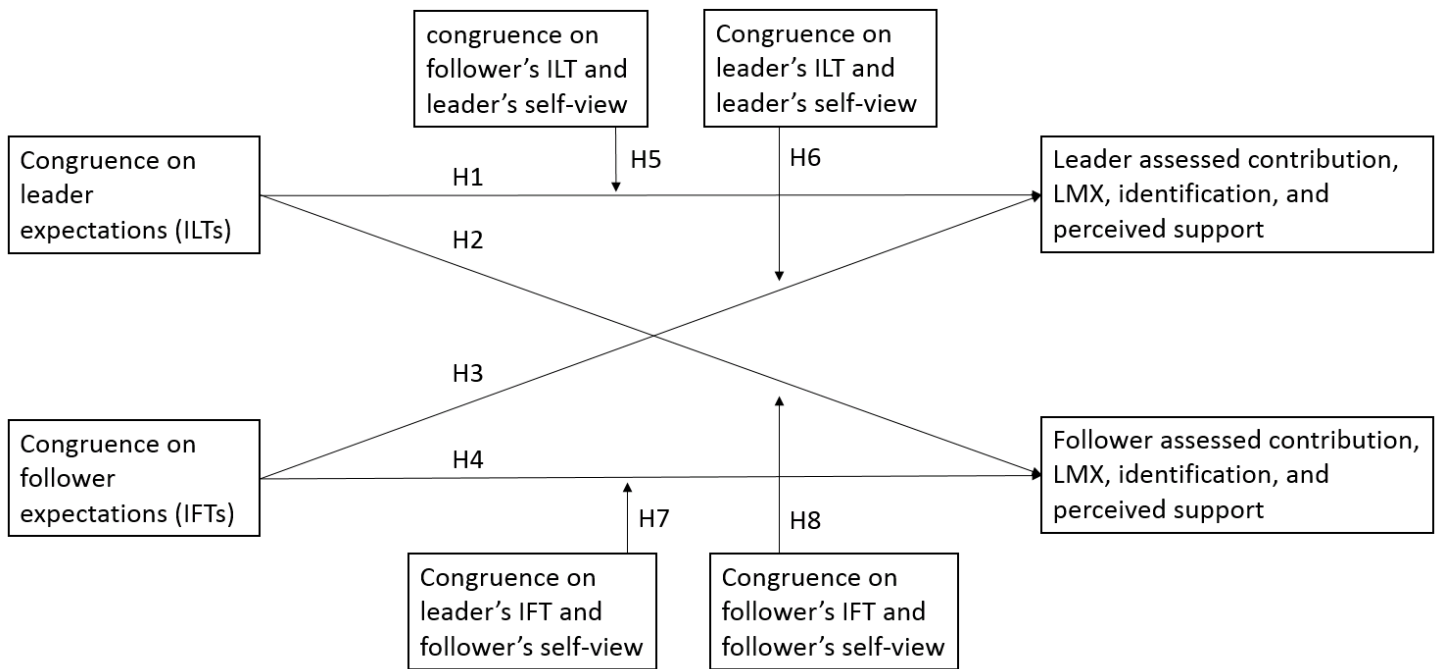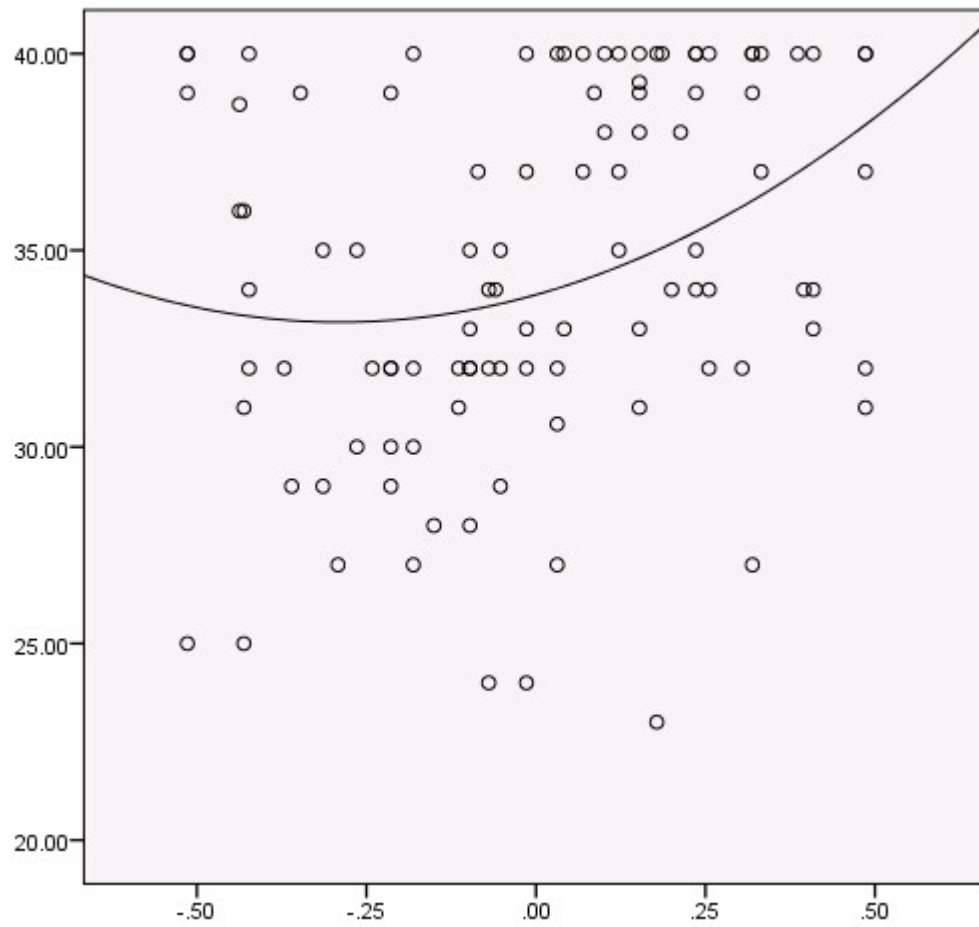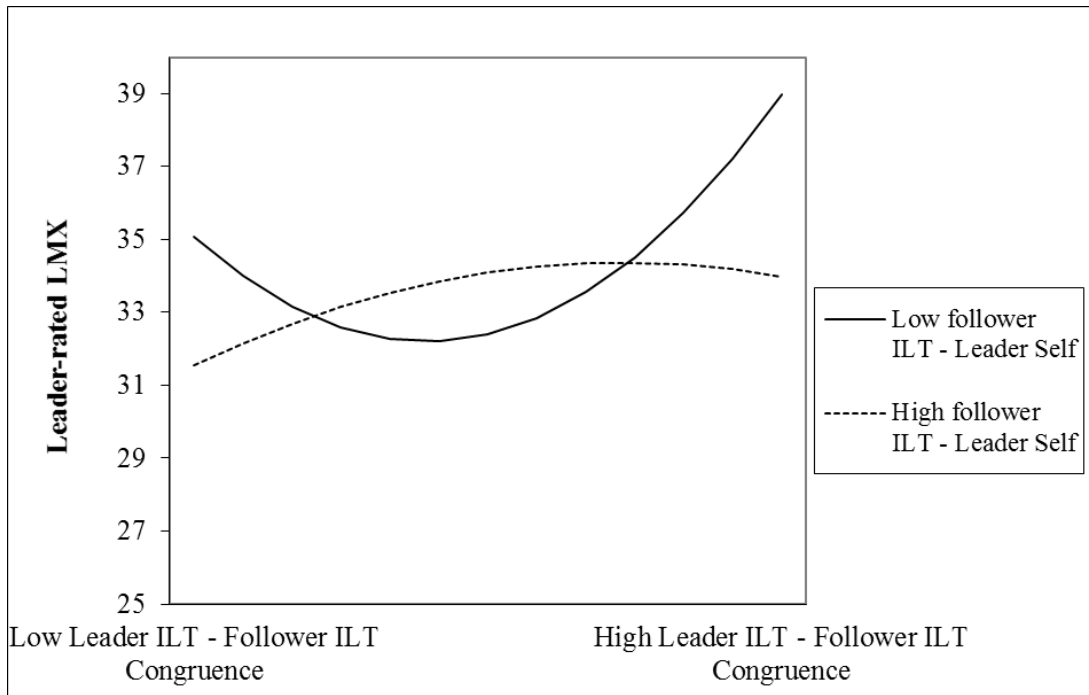* $p \leq .05$
** $p < .01$

*Figure 1.* Conceptual model and visual depiction of hypotheses.  H = hypothesis.

*Figure 2.* Scatterplot depicting the non-linear association between leader ILT - follower ILT congruence (x-axis) and leader-rated LMX (y-axis). Line shown indicates the quadratic line of best fit.

*Figure 3.* Plot of the two-way interaction effects between the curvilinear main effect of leader ILT - follower ILT congruence and linear moderator of follower ILT - leader self-view congruence on the dependent variable of leader-rated LMX.