ABSTRACT

PATEL, RUCHI KAMESHKUMAR. Examining the Relation Between Individuals’ Implicit Leadership Theories and Implicit Followership Theories. (Under the direction of Dr. S. Bartholomew Craig.)

This study used latent profile analysis to identify four implicit leadership theory (ILT) profiles and six implicit followership theory (IFT) profiles among respondents, on 12 dimensions of leader and follower schemata. Results were based on a sample of 281 adult participants employed full-time in the United States. The content and form of the ILT and IFT profiles were examined in terms of multivariate pattern and frequency of occurrence. Participants’ gender was not related to either ILT or IFT profiles, but personality did predict implicit theory profile. Specifically, agreeableness, conscientiousness, and emotional stability were related to ILT type, and agreeableness and conscientiousness were related to IFT type. Contingency table analysis identified significant, but not complete, correspondence between participants’ schemata for leaders and for non-management employees, suggesting the existence of generalized “implicit coworker theories” that apply to both leaders and nonleaders.
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Examining the Relation Between Individuals’ Implicit Leadership Theories and Implicit Followership Theories

by
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DEDICATION

I dedicate this dissertation to my parents, Kamlesh and Hemangini Patel. The support, guidance, and love you give me to pursue my dreams is “unnnbelievable.”
BIOGRAPHY

Ruchi Patel was born in Vadodara, Gujarat in India. She moved to the US at age eight and lived in Nutley, NJ during her adolescent years. After graduating from Terry Sanford High School in Fayetteville, NC, she received her Bachelor of Arts degrees in Psychology and Communication Studies from the University of North Carolina at Chapel Hill in 2003. She began her graduate education in Industrial/Organizational Psychology at East Carolina University in the fall of 2005 and received her Master of Arts degree in 2008. Ruchi started her doctoral studies at North Carolina State University in the fall of 2007. During this time, she had several particularly valuable opportunities, including an assistantship at the Friday Institute for Educational Innovation, and experience as a psychometrics consultant with Javelin HR Solutions and as an organizational development professional at QuintilesIMS.
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Thank you to my graduate school family, Courtney Williams, Ashley Hoffman, and Amy Duvernet for your mentorship and hand-holding while I was working on my dissertation. Your friendship throughout graduate school has been a blessing. Maybe Steve will finally get a taste of the conference cities one day.

Finally, a loving thanks to all my friends and family who have been supporting me and waiting so patiently for me to be done with school. Thanks to my parents, and to Dhabufoi and Matiba for letting me relax when I am at home and sending me back with so many prepared meals. Thanks to Kirti for reviewing drafts, for getting me out to explore locally, and for being my personal travel agent and tour guide. Thanks to Kinjel and Anupa for the phone calls, girls’ trips, and decades full of laughs. Thanks to Mike for cheering me on, for helping me meet deadlines, and for being so understanding. I am so grateful to all of you!
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Examining the Relation Between Individuals’ Implicit Leadership Theories and Implicit Followership Theories

Organizational research has long focused on the importance of leaders to various follower and organization outcomes, as leaders have the responsibility of making decisions for the well-being of their employees and for their organizations to adjust and thrive in competitive environments (Hogan & Kaiser, 2005; Waldman & Yammarino, 1999). More specifically, results of this research have shown that leaders have an impact on follower performance, follower job satisfaction, follower motivation (Harter, Schmidt, & Hayes, 2002; Judge and Piccolo, 2004; Judge, Piccolo, & Ilies, 2004), group cooperation, organizational culture (Peterson, Smith, Martorana, & Owens, 2003), and the success of strategic initiatives (Burgelman, 1983; Guth & Macmillan, 1986; Hackman & Wageman, 2005; O’Reilly, Caldwell, Chatman, Lapiz, & Self, 2009; Podolny, Khurana, & Hill-Popper, 2005; Wooldridge & Floyd, 1990); as well as business outcomes such as return on assets, return on investment, and income and sales growth (Peterson et al., 2003).

Though the majority of leadership research has focused on either the personal attributes or behavioral style of the leader, with the inception of implicit theories in psychology, researchers started to examine the idea that leaders’ effectiveness may depend on both attributes within the leader, and also on the characteristics the beholder finds important (Rush, Thomas, & Lord, 1977; Lord, Foti, & de Vader, 1984). The set of characteristics individuals consider important for leadership are referred to as their implicit leadership theories (ILTs). Similarly, individuals also have implicit followership theories
(IFTs), which are the assumptions people hold about the characteristics of followers (Sy, 2010). While research on ILTs and IFTs has had conceptual and procedural overlap, there has been scant research that examines each in the context of the other. The current study attempted to bridge the gap between the parallel streams of research by examining the same set of attributes that individuals may endorse for their ILTs or IFTs.

The Study of Leadership

From a psychological perspective, leadership generally refers to a process of social influence where a leader influences others to perform tasks contributing to a specific group goal—in the context of this paper, the success of an organization (Hogan, Curphy, & Hogan, 1994; Judge et al., 2002). Leadership research has varied over the last several decades as different perspectives have garnered interest. The most prominent approaches have consistently been leader-focused, and there has been a smaller but steady stream of both situation-based and relationship-focused approaches.

The systematic study of leadership, with publications from the 1930s through the 1950s, started with an atheoretical approach to investigate personal characteristics that could differentiate leaders from non-leaders (House & Aditya, 1997; Stogdill, 1947). Because this approach to leadership implies that leaders are “born and not made,” with effective leaders having traits such as intelligence, physical energy, confidence, etc., they were referred to as “great man” theories, based on the work of Scottish writer Thomas Carlyle (1840). Methodological trouble with the early studies of the trait approach and the conceptual problem that traits are difficult to teach or change (Northouse, 2004), led to researchers
focusing on the behavior, or style, of leaders. The most well-known of these studies were conducted at Ohio State University (Fleishman, 1953) and the University of Michigan (Likert, 1961), both of which identified two dimensions of leader behaviors: task-oriented and people- or relationship-oriented behaviors. Similar to the trait approach, much of the behavior approach was inductive, plagued with measurement problems, it was conducted with employees from lower-levels of organizations, and results were mixed when trying to connect leadership style with desired outcomes (House & Aditya, 1997; Judge, Piccolo, & Ilies, 2004). Despite these limitations, the concept of the leadership style dichotomy influenced subsequent leadership theories, including contingency theory, path-goal theory and transformational leadership (Evans, 1996; Hersey & Blanchard, 1974; House & Aditya, 1997; Judge, Piccolo, & Ilies, 2004).

As findings from the behavior approach did not identify any leadership style that was universally most effective, researchers decided to investigate how the match between leaders and existing situational and environmental factors would affect leader effectiveness, with the rise of Fiedler’s contingency theory (Fiedler & Macaulay, 1998), Situational Leadership Theory (SLT; Hersey & Blanchard, 1969), path-goal theory (House, 1996), etc. Fiedler’s Contingency theory posits that environments differ on how much control, power, and influence they provide, and that leadership effectiveness is based on the interaction between the leader’s style and the situational context. Hersey and Blanchard (1982) proposed that the situation is the followers’ maturity level for the task at hand, and to be effective, leaders need to adapt their style to the situational demands. Similarly, path-goal theory is based on the
premise that to be effective, a leader’s function is to arrange the linkages between effort, goal attainment, and extrinsic rewards for followers, only to the extent that the environment does not provide those linkages. While all three of these theories have components that are difficult to operationally define (House & Aditya, 1997; Northouse, 2004), there has been substantial support for contingency theory (Peters, Hartke, & Pohlman, 1985; Strube & Garcia, 1981), and the high face validity of SLT has allowed it to thrive in organizations (Graeff, 1997; House & Aditya, 1997; Vecchio, 1987). However, the complexity of path-goal theory has made it difficult to both test and implement in practice (Evans, 1996; Northouse, 2004).

Though path-goal theory emerged as a contingency theory, it did present a focus on the leader-subordinate interaction; leader-member exchange (LMX) theory was the first major theory to present the relationship between the leader and subordinate as the primary focus (Graen & Scandura, 1987). LMX theory is based on research that shows leaders develop differentiated relationships with their subordinates, and the leader-member exchange is differentiated based on the quality of that exchange (Schriesheim, Castro, & Cogliser, 1998). Recent meta-analyses have shown support for LMX for several outcomes across cultures, such as performance, turnover, employee commitment, job satisfaction, empowerment, justice perceptions, etc. (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997; Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016; Rockstuhl, Dulebohn, Ang, & Shore, 2012).
More modern approaches to leadership research emphasize emotions and values (Yukl, 1999) as opposed to the previous ones which assume some rational decision-making (Fiedler & Macaulay, 1998; House, 1996; House & Aditya, 1997; House & Howell, 1992; Schriesheim, Castro, & Cogliser, 1998). The most published leadership theories over the last several decades cover charismatic leadership and transformational leadership (Dinh, et al., 2014; Lowe & Gardner, 2000). Charismatic leadership theory posits that leaders use their charisma to transform the needs, preferences, desires, values, and aspirations of their followers from self-interests to the group’s collective interests (House & Howell, 1992). Meta-analytic studies have shown that charismatic leadership does predict outcomes such as task performance, organizational citizenship behaviors, perceived leader effectiveness, and group performance (Banks, et al., 2017; Fuller, Patterson, Hester, & Stringer, 1996). Transformational leadership theory subsumes aspects of charismatic leadership, and builds upon it to suggest that leaders could influence their followers to exceptional performance through a sense of mission and new ways of thinking and learning to exceptional performance (Judge & Piccolo, 2004; Lord, Day, Zaccaro, Avolio, & Eagly, 2017; Yukl, 1999). Similar to the findings of meta-analyses on charismatic leadership, transformational leadership has also been shown to predict task performance, group performance, organizational citizenship behaviors, satisfaction with leader, and leadership effectiveness (Banks, McCauley, Gardner, & Guler, 2016; Judge & Piccolo, 2004).
Implicit Leadership Theories

Whereas each of the theories discussed above enhances our understanding of leadership, one approach to leadership that has been under-researched focuses actively on the perspective of the followers rather than some objective view of the leader: implicit leadership theories, also referred to as the leader categorization or cognitive categorization approach. In order to simplify the complex stimuli we encounter, one of the most basic mental functions for humans is classifying and categorizing these stimuli (Rosch, 1978; Landy, 2008). Because humans are “cognitive miser,” we naturally classify others into categories (Fiske & Taylor, 1991); in organizations, we classify others as leaders and followers (Engle & Lord, 1997; Lord, Foti, & Phillips, 1982; Lord & Maher, 1993). Research has indicated that individuals’ prior expectations and internal cognitive structures for leadership have impacts on how they perceive leadership behaviors. People use their cognitive prototypes to distinguish leaders from non-leaders (e.g., Eptiropaki & Martin, 2004; Lord, Foti, & deVader, 1984; Schyns & Meindl, 2005).

As this approach to leadership research began to take shape, the concept of an internal schema of what a leader should be also began to form. Such schemas, called implicit leadership theories (ILTs), refer to cognitive structures used to make attributions about these leaders and specify the characteristics believed by the ILT’s holder to be important to effective leadership (Epitropaki & Martin, 2004; Lord et al. 1984). These presuppositions stem from a combination of personal beliefs as well as previous experiences with leaders. ILTs may also be referred to as mental models that affect the way leaders are perceived and
received (Javidan, Dorfman, deLuque, & House, 2006). The content and structure of these categories are referred to as ILTs, including expected leader characteristics and behaviors. Because individuals hold different role expectations and cognitive categories of leadership, ILTs differ among people. An individual’s ILT is structured as a hierarchical model of leadership categories, which specify their ideal leaders. These systems are stored in the observers’ memory and operated automatically when interacting with leaders (Lord et al., 1984).

Like other cognitive schemas, ILTs are developed through early childhood experiences, exposure to images, past experiences with leaders, interpersonal interactions in family and organized groups, and socialization (Epitropaki & Martin, 2004; Hunt, et al., 1990; Keller, 2003; Nye & Forsyth, 1991; Ritter & Lord, 2007). Researchers specified that early childhood experiences have impacts on shaping our images and expectations of ideal leaders, and particularly parents play an important role in the development process (Hunt, et al., 1990; Keller, 2003). More specifically, attachment styles developed in early childhood with parents have an impact on the development of mental models of leadership and explained individual differences. This is especially apparent in the ability to adapt existing ILTs when interacting with people who have different, incongruent ILTs (Keller, 2003). The adaptation mechanism implies dynamic states of individuals’ mental models of leadership. Social contexts and experiences with new leaders continue to shape the category systems of ILTs, though this may be a slow process (Epitropaki & Martin, 2004; Epitropaki & Martin, 2005).
The content of ILTs includes the traits, behaviors, and attitudes that comprise individuals’ schemas, and how these schemas may differ between individuals. Lord et al. (1984) proposed that there are two categories of ILT traits—prototypical traits, which are traits positively associated with leadership; and anti-prototypical traits, which are negatively associated with leadership. Offerman, Kennedy, and Wirtz (1994) expanded upon this dichotomy when developing their measure of ILTs, and most recently, Epitropaki and Martin (2004) further developed and shortened the measure. Epitropaki and Martin (2004) found support for a 6-factor solution to represent ILTs in an organizational setting. The four prototypical factors were Sensitivity, Intelligence, Dedication, and Dynamism; and the two anti-prototypical factors were Tyranny and Masculinity. Epitropaki and Martin (2004; 2005) also found evidence of generalizability of ILTs across different employee groups of age, organizational position, and tenure; as well as support for the stability of ILTs over time. Den Hartog et al. (1999) also found support for the generalizability of aspects of charismatic and transformational leadership across cultures. However, no study results have been able to apply a full set of effective leadership characteristics across a wide range of cultures (Den Hartog et al. 1999; Gerstner & Day, 1994; House, Hanges, Javidan, Dorfman, & Gupta, 2004).

Early studies of ILTs viewed them as a potential source of bias or error in leadership measurement (Eden & Leviatan, 1975; Gioia & Sims, 1985; Rush, Thomas, & Lord, 1977); however, Lord and Maher (1991) proposed there would be a strong rationale for studying the role of ILTs in organizational contexts beyond that of measurement error and several studies
have started examining this concept outside of the laboratory. In the organizational context, Epitropaki and Martin (2005) found that the greater the match between a subordinate’s ILT and the subordinate’s rating of their manager’s profile for prototypic traits, the better the quality of the LMX the employee developed with that manager. In turn, the match in prototypic traits had an indirect effect on organizational commitment, job satisfaction, and well-being, mediated through the dyadic manager–employee interaction. Additionally, results of the longitudinal investigation found the same pattern and ILT–manager profile match, LMX, and employee outcomes one year later, suggesting that the match between subordinates’ ILTs and ratings of their managers affects LMX and not the other way around; i.e., the continued interactions with managers did not influence subordinates to change their original categorization nor the ILT–manager profile match. More recently, Riggs and Porter (2016) investigated the effects of congruence between followers’ ILTs and leaders’ ILTs in MBA students who were also full-time employees, and found that higher congruence for prototypical traits predicted a higher quality LMX. However, Coyle and Foti (2015) found that in undergraduate students, the prototype congruence only had an indirect effect on LMX, mediated by observed cooperation.

ILTIs have also been examined in the context of transformational leadership. When participants were asked to describe their immediate supervisors, Bass and Avolio (1989) found that prototypic traits were more highly correlated with transformational leadership than transactional leadership, indicating that people’s prototypes and ideals are aligned with transformational leadership. Similarly, Den Hartog et al. (1999) also found that charismatic
and transformational leadership attributes were universally endorsed as aspects of outstanding leadership.

**Implicit Followership Theories**

A parallel literature on implicit theories of performance has emerged that also adopts an information-processing approach: implicit followership theories (IFTs; Shondrick & Lord, 2010; Sy, 2010). Similar to ILTs, IFTs are defined as the cognitive structures and schemas about the traits and behaviors that characterize followers (Sy, 2010), and likely form at an early age (Hunt, et al., 1990), developing with increased interaction and exposure with followers (Lord & Maher, 1993). Because the focus on IFTs started with the benefit of insight from ILT research, studies were much quicker to examine IFTs in organizational settings (Sy, 2010; Whiteley, Sy, & Johnson, 2012). Building upon research that addresses the content of ILTs, Sy (2010) has investigated the content of IFTs. He found support for six factors that comprise IFTs: industry, enthusiasm, and being a good citizen are the prototypic factors; and conformity, insubordination, and incompetence are the antiprototypic factors. He also found that the content and endorsement of IFTs was consistent across managerial levels, job functions, and spans of control (Epitropaki et al., 2013).

When examining the relationship between IFTs and LMX, Sy (2010) found that leaders’ followership prototype was positively related to followers’ perspectives on liking the leader, LMX quality with the leader, trust in the leader and job satisfaction; as well as leaders’ perspectives on liking the followers and relationship quality with followers. Similarly, leaders’ followership antiprototype was negatively related to the same outcomes,
except leaders’ liking of followers. Whiteley et al. (2012) found that more positive leader IFTs (based on prototypic traits) predicted higher performance expectations, liking, and LMX quality from leaders, which in turn influenced peer-rated follower performance.

**Measurement of ILTs/IFTs**

There are two approaches that can be taken when examining ILTs/IFTs. Trait approaches to predicting leader emergence and leader effectiveness assume leadership depends on personal qualities of the leader, such as intelligence or charisma (Judge, Bono, Ilies, & Gerhardt, 2002). While most studies of the measurement of ILTs and IFTs have been trait or variable-oriented, the proposed study focuses on a pattern-oriented approach to ILTs and IFTs. In variable-oriented approaches, dispositional characteristics are viewed as distinct aspects of a person that influence various other aspects of that person or outcomes. This type of approach has had empirical support; for example, where general cognitive ability and leader personality made unique contributions to predict leader performance (Connelly, Gilbert, Zaccaro, Threlfall, Marks, & Mumford, 2000; Judge et al.). However, many theorists have argued in favor of a pattern-oriented approach to examine aspects of a person as a whole rather than as discrete parts (Foti & Hauenstein, 2007; Ho & Michael, 2013; Magnusson, 1995; Mumford & Owens, 1984), while others have argued that the two approaches are complementary to each other (Bergman & Trost, 2006). Variable-oriented approaches are critical for identifying which variables comprise ILTs, but pattern-oriented approaches can be used to identify the patterns of ILT variables to create groups into which people can be classified. Once people are part of a group with a particular pattern, group
membership becomes the focus, rather than the separate variables that define the group, as was the case for the current study.

Bergman and Trost (2006) sought to begin clarifying the terms “person-oriented” or “pattern-oriented” approaches as well as their distinction from variable-oriented approaches, because of confusion in the use of the terms across literature. At the theoretical level, variable-oriented approaches refer to some variables which are used to predict some future outcome variables. At the methodological level, the relevant variables and their relations across time are generally measured using linear statistical models. On the other hand, person-oriented approaches at the theoretical level regard “the individual as a functioning whole with processes operating at a system level and its components jointly contributing to what happens in development” (Bergman & Trost, 2006, p. 604). At the methodological level, a person-oriented approach focuses on identifying the particular subsystem relevant to the particular research under study, measuring the components within that subsystem, and then studying the components as a whole, which is generally realized using some type of pattern-oriented approach, including, but not limited to cluster analysis and, more recently, latent profile analysis. As such, ILTs and IFTs can be regarded as subsystems of individuals, comprised of various levels of traits or dispositions that individuals think are definitive of their ideal leader.

The Current Study

Most of the published studies on ILTs, all published studies on IFTs, and all published studies that have looked at both ILTs and IFTs have approached schemas from a
variable-oriented approach. The current study focused on ILTs and IFTs from a pattern-oriented approach by examining the patterns of variables comprising participants’ schemas.

**Research Question 1.** How many ILT profiles compromise a useful taxonomy of individuals?

**Research Question 2.** How many IFT profiles compromise a useful taxonomy of individuals?

**Research Question 3.** What is the nature of each ILT profile in terms of multivariate pattern?

**Research Question 4.** What is the nature of each IFT profile in terms of multivariate pattern?

**Research Question 5.** What is the nature of each ILT profile in terms of frequency of occurrence?

**Research Question 6.** What is the nature of each IFT profile in terms of frequency of occurrence?

In addition to understanding the composition of ILT and IFT profiles, the current study investigated the relationship between profiles and external correlates, including gender and the Big Five personality traits: openness to experience, conscientiousness, extraversion, agreeableness, and emotional stability.

Deal and Stevenson (1998) did not find any differences in content for male and female perceptions of a prototypic leader, they did find differences in the strength of endorsement for some items. For example, men rated traits such as aggressive and
competitive as more prototypical of leaders than women did; and women rated traits such as being helpful and being aware of others’ feelings higher than men did. Epitropaki and Martin (2004) similarly found that women’s prototypic leaders tend to be more understanding, sincere, and honest than men’s; while antiprototypic leaders tend to be more domineering, pushy, and manipulative than men’s.

**Research Question 7.** What is the relation between rater gender and ILT profile?

**Research Question 8.** What is the relation between rater gender and IFT profile?

Because the Big Five model of personality can be used to describe the most prominent aspects of personality, this model was used in the current study to understand the relationship between individuals’ personality and their ILTs/IFTs. Keller (2003) found that the individuals characterized prototypical leaders as having traits similar to their own. For example, individuals who characterized themselves as extraverts valued a charismatic leader, and conscientious individuals valued dedicated leaders.

**Research Question 9.** What is the relation between rater personality and ILT profile?

**Research Question 10.** What is the relation between rater personality and IFT profile?

Though Sy (2010) addressed the relationship between ILTs and IFTs, it was in the context of convergent and discriminant validity during scale development. By definition, the scales used to measure ILTs and IFTs would be kept separate. The current study combined factors from existing measures of ILTs and IFTs to determine the overlap in individuals’
schemas. The same set of items was presented twice, but with different prompts—once to determine participants’ ILTs, and again to determine participants’ IFTs.

**Research Question 11.** What is the relation between individuals’ ILT and IFT profiles?

**Research Question 12.** To what extent are ILTs predictable from IFTs?

**Method**

**Participants and Procedure**

A sample of 310 participants was recruited from Mechanical Turk (MTurk), an online crowdsourcing marketplace through which individuals are paid to complete various tasks. In order to qualify for this study, participants had to be adults, employed full-time, and based in the United States.

The actual survey was hosted on Qualtrics, an online survey software tool. Participants were first screened to determine whether they qualify for the study. If they did qualify, they were asked to complete measures of ILTs and IFTs. The order in which respondents were asked to complete measures of their ILTs and IFTs were randomly assigned, such that half of the respondents were asked to indicate their ILTs first, and the other half were asked to rate their ILTs first. Participants were also asked to provide demographic information regarding their gender, race, managerial experience, and age. Upon successful completion of the study, the participants were paid for their efforts.

After data collection was complete, data were screened for careless responses and multivariate outliers. The criteria to retain or remove cases were based on the results of four
indicators: one bogus item, two LongString indices, and response time. A bogus item, “garage,” was included in the list of ILT characteristics to identify respondents who may not have been paying attention. Respondents who endorsed this item with any response other than “not characteristic at all” were flagged. Two LongString indices were calculated for the two longest pages of the survey, each of which had the 39 characteristics of ILTs or IFTs that participants could endorse as typical of a leader or follower. A LongString index is the maximum number of identical responses in a row. Respondents who had a LongString index value that was two standard deviations above the mean or more were flagged. Respondents with survey completion times under three minutes were also flagged. The 14 respondents who were flagged on two or more of these indicators were removed from further analyses.

As a latent profile analysis was the initial analysis conducted for this paper, multivariate outliers were identified with the use of the Mahalanobis distance (MD), which identified respondents who whose patterns of responses varied across a series of items. Two MD values were calculated—one each for respondents’ ILTs and IFTs, each of which was comprised of 12 scale scores. The 15 cases that were removed had a significant MD value ($p < .001$) for either the pattern of ILT or IFT responses.

In total, 29 cases were removed. Statistically, there were no demographic differences between the cases removed and the cases retained at the $p = .05$ level. The age range for the sample of 281 cases that were retained for analysis was 19 to 68 years, with a mean of 37 years and standard deviation of 10. Additional demographic information is provided in Table 1.
Table 1  
*Summary of sample demographic characteristics*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>279</td>
<td>52%</td>
</tr>
<tr>
<td>Female</td>
<td>279</td>
<td>48%</td>
</tr>
<tr>
<td><strong>Highest Level of Education Attained</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school graduate (includes equivalency such as a GED)</td>
<td>280</td>
<td>7%</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td></td>
<td>19%</td>
</tr>
<tr>
<td>Associates degree (AA, AS, AAS, etc)</td>
<td></td>
<td>11%</td>
</tr>
<tr>
<td>Bachelors degree (BA, BS, BFA, etc)</td>
<td></td>
<td>48%</td>
</tr>
<tr>
<td>Masters degree (MA, MS, MBA, etc)</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>Doctorate or professional degree (PhD, MD, JD, DDS, etc)</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td><strong>Race and Ethnicity (participants could check more than one)</strong></td>
<td></td>
<td></td>
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<td>Black or African American</td>
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<td>White</td>
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<td>Yes (range = .5 to 51 years, $M = 7$ years, $SD = 7$)</td>
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<td>Accommodation and Food Services</td>
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<tr>
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<td>Arts, Entertainment, and Recreation</td>
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<td>Management of Companies and Enterprises</td>
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Measures

**ILTs.** Participants’ ILTs were assessed by combining a shortened version of Offermann, Kennedy, and Wirtz’s (1994) ILT scale (see Appendix A) with an 18-item scale developed by Sy (2010; see Appendix B).

An investigation of the shortened ILT measure adapted by Epitropaki and Martin (2004) resulted in a 21-item measure with six factors comprising the Leadership Prototype Sensitivity, Intelligence, Dedication, and Dynamism, Tyranny and Masculinity.


To determine ILT profile membership, participants were asked to rate how characteristic each of the combined 39 traits are of a business leader. Each trait was rated on a 9-point scale ranging from 1 (not at all characteristic) to 9 (extremely characteristic).

**IFTs.** Participants’ IFTs were also assessed using Epitropaki and Martin’s (2004) 21-item measure and Sy’s (2010) 18-item measure, but the prompt was different. To determine IFT profile membership, participants were asked to rate how characteristic each of the 39 traits are of “a follower in a business setting (e.g., an employee in a non-managerial role).” Each trait was rated on a 9-point scale ranging from 1 (not at all characteristic) to 9 (extremely characteristic).

**Big Five personality inventory.** The Big Five dimensions of personality (conscientiousness, extraversion, agreeableness, openness to experience, and emotional
stability) were assessed using the Ten-Item Personality Inventory (TIPI) developed by Gosling, Rentfrow, and Swann (2003). The TIPI includes two items for each of the Big Five personality dimensions (Appendix C). Participants were asked to indicate the extent to which they agree or disagree with each statement using a 7-point Likert-type scale ranging from 1 (disagree strongly) to 7 (agree strongly). Each item consists of two characteristics separated by a comma, and all items have the same stem, “I see myself as:”.

**Supplementary item.** One open-ended item was asked: “What was your thought process when you were answering the items on follower characteristics?” While the concept and images of leaders are salient in media and daily interactions, the concept of employees as followers may be difficult to derive. Responses to this item were used to determine how respondents conceptualized followers in order to rate their characteristics, and could provide insight on how to improve followership research.

**Results**

**Descriptive Statistics**

The means, standard deviations, and intercorrelations among study variables are presented in Table 2. Cronbach’s coefficient alpha internal consistency estimates are included along the diagonal.
Table 2
Summary of means, standard deviations, intercorrelations, and reliabilities (N = 281)

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**Note.** Numbers along the diagonal are Cronbach’s coefficient alpha values.

*p < .05, **p < .01
Table 2 (continued)

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<td>.06</td>
<td>.06</td>
<td>.01</td>
<td>.13*</td>
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*Note. Numbers along the diagonal are Cronbach’s coefficient alpha values.*

*p < .05, **p < .01
Table 2 (continued)

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<td></td>
</tr>
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<td>3 Dedication</td>
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<td>4 Dynamism</td>
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</tr>
<tr>
<td>5 Tyranny</td>
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</tr>
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<td>6 Masculinity</td>
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<td>7 Industry</td>
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<td>8 Enthusiasm</td>
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</tr>
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<td>9 Good Citizen</td>
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<td>10 Conformity</td>
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<td>11 Insubordination</td>
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<tr>
<td>12 Incompetence</td>
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<td>19 Industry</td>
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<td>20 Enthusiasm</td>
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</tr>
<tr>
<td>21 Good Citizen</td>
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<td></td>
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<tr>
<td>22 Conformity</td>
<td></td>
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<tr>
<td>23 Insubordination</td>
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<td>24 Incompetence</td>
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Big Five Personality Variables

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<tr>
<td>25 Extraversion</td>
<td>.78</td>
<td></td>
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<td></td>
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<tr>
<td>26 Agreeableness</td>
<td>.09</td>
<td>(.54)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>27 Conscientiousness</td>
<td>.21**</td>
<td>.43**</td>
<td>(.57)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28 Emotional Stability</td>
<td>.30**</td>
<td>.40**</td>
<td>.54**</td>
<td>(.82)</td>
<td></td>
</tr>
<tr>
<td>29 Openness</td>
<td>.42**</td>
<td>.23**</td>
<td>.27**</td>
<td>.21**</td>
<td>(.60)</td>
</tr>
</tbody>
</table>

Note. Numbers along the diagonal are Cronbach’s coefficient alpha values.  
*p < .05, **p < .01
Research Questions 1-6

The first six research questions (i.e., understanding the nature of ILTs and IFTs) were addressed with latent profile analysis (LPA), which supports a person-oriented approach. At the theoretical level, Bergman and Trost (2006) have clarified that person-oriented approaches regard “the individual as a functioning whole with processes operating at a system level and its components jointly contributing to what happens in development” (p. 604). At the methodological level, the person-oriented approach focuses on identifying the particular subsystem relevant to the particular research under study, measuring the components within that subsystem, and then studying the set of components as a whole, which can be realized with LPA.

The LPA, which uses maximum likelihood estimation to assign participants demonstrating similar ILT or IFT patterns to a latent category (profile), was conducted using Mplus (Muthén & Muthén, 2007). The optimal number of profiles (RQs 1 and 2) was determined by examining the fit indices for each model. The first model was a one-profile model, and additional profiles were added one at a time until problems with non-convergence emerged (Lubke & Muthén, 2005; Nylund, Asparouhov, & Muthén, 2007). At this stage, several fit indices were examined to determine the most appropriate number of latent profiles. The two classes of fit indices examined were information-theoretic methods and likelihood ratio (LR) statistical test methods.

One of the information-theoretic methods is the Bayesian Information Criterion (BIC). The BIC is based on the maximum likelihood estimates of the model parameters for
selecting the parsimonious model, where a lower BIC value indicates a better fitting model (Collins, Fidler, Wugalter, & Long, 1993; Magidson & Vermunt, 2004; Nylund, et al, 2007; Tein, Coxe, & Cham, 2013). Akaike’s Information Criterion (AIC) is similar to the BIC and though it is commonly used, it has not been shown to be a reliable method for selecting the number of classes (Nylund, et al., 2007; Tein, et al., 2013).

An LR statistical test method is the bootstrap likelihood ratio test (BLRT), recommended by McLachlan and Peel (2000). The BLRT uses a bootstrap resampling method to approximate a $p$-value that indicates whether the increase in model fit between the $k-1$ and $k$ class model provides a significantly better fit to the observed data. The preferred model is determined when a model with $k$ classes no longer has a significant BLRT. Another recommended LR method is the Lo-Mendell-Rubin LR (LMR) test (Lo, Mendell, & Rubin, 2001; Tein, et al., 2013). The LMR uses the adjusted asymptotic distribution of the LR statistics to compare model fit between the $k-1$ and $k$ class model. Similar to the BLRT, the preferred model is determined when a model with $k$ classes no longer has a significant LMR, and the $k-1$ model is preferred.

In addition to choosing a model with the lowest BIC value, a significant BLRT, and a significant LMR, the optimal solution should also have no profiles with a small number of cases, and should contain clearly distinguishable profiles, as indicated by a high probability (.75 or higher) that individuals belong to their assigned profile and a low probability (.14 or lower) that individuals belong to another profile (Meyer, Stanley, & Parfyonova, 2012).
Assumptions of normality. Because maximum likelihood estimation assumes that all individual univariate distributions are normal (Kline, 2015), all 24 variables included in the LPA were assessed to determine acceptability for analysis. The most conservative general guidelines suggest skewness and kurtosis values within ±2 range is acceptable, and ±1 is excellent (Curran, West, & Finch, 1996; George & Mallery, 2016; Kline, 2015). All of these variables, except one, had skewness and kurtosis values within ±1. One variable, the incompetence scale score used for ILT profiles (ILT_Incompetence), had a skewness value of 1.86 and a kurtosis value of 4.05. This variable was transformed with a log transformation, which reduced skewness to .70 and kurtosis to -.44. The LPA on ILT profiles was conducted with the transformed variable and the results were compared to the results of the LPA with the untransformed variable. Differences in model fit for the two analyses were trivial, and did not affect the conclusions for the analyses. Therefore, it was determined to keep the variable untransformed, and results are based on the analysis of the untransformed variable.

ILT profiles. For the LPA conducted to determine ILT profiles, a two-profile model was initially specified, and profiles were successively added. Upon the addition of a seventh profile, issues of non-convergence arose. The five previous multi-class models were compared to determine which was the most appropriate. All profiles had a significant BLRT value, and the BIC values were slightly lower for the five- and six-profile models than for the four-profile model, but the LMR value was no longer significant for a five- or six-profile model. Because the LMR could underestimate the number of profiles (Tein, et al., 2013), of the profiles with a significant LMR value, the solution with the highest number or profiles,
the four-profile model, was determined to be the most appropriate. The significance of the LMR value indicates that the four-profile model had a significant improvement in model fit compared to the three-profile model. The four-profile solution also assigned participants unambiguously to their respective profiles based on the posterior probabilities. Fit indices for ILT profiles are provided in Table 3 and posterior probabilities for the final four-profile solution are provided in Table 4.

Table 3

*LPA model fit indices for ILT profiles*

<table>
<thead>
<tr>
<th>Number of Profiles</th>
<th>BIC</th>
<th>LMR value</th>
<th>p</th>
<th>BLRT value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>11287.92</td>
<td>834.54</td>
<td>&lt; .001</td>
<td>-5962.61</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>3</td>
<td>10984.54</td>
<td>371.60</td>
<td>&lt; .001</td>
<td>-5539.65</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>4</td>
<td>10876.21</td>
<td>179.18</td>
<td>.05</td>
<td>-5351.31</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>5</td>
<td>10769.50</td>
<td>177.59</td>
<td>.15</td>
<td>-5260.50</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>6</td>
<td>10693.01</td>
<td>147.77</td>
<td>.31</td>
<td>-5170.49</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Table 4

*Classification posterior probabilities for the four-profile ILT model for most likely latent class membership (row) by latent class (column)*

<table>
<thead>
<tr>
<th></th>
<th>Profile 1</th>
<th>Profile 2</th>
<th>Profile 3</th>
<th>Profile 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile 1</td>
<td>0.97</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Profile 2</td>
<td>0.00</td>
<td>0.97</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>Profile 3</td>
<td>0.00</td>
<td>0.02</td>
<td>0.95</td>
<td>0.03</td>
</tr>
<tr>
<td>Profile 4</td>
<td>0.00</td>
<td>0.04</td>
<td>0.04</td>
<td>0.93</td>
</tr>
</tbody>
</table>

*Note.* Values in bold along the diagonal are the average posterior probabilities associated with the profiles to which individuals were assigned.

To address Research Question 3, which asked about the nature of each ILT profile in terms of multivariate pattern, Table 5 provides the standardized means and standard
deviations for each of the 12 ILT dimensions to provide the average pattern for each profile.

Table 5 also indicates the percent of the sample assigned to each ILT profile to address Research Question 5, which asked about the nature of each ILT profile in terms of frequency of occurrence.

Table 5
*LPA sample proportions, standardized mean values, and standard deviations for ILT profiles*

<table>
<thead>
<tr>
<th>Profile 1</th>
<th>Profile 2</th>
<th>Profile 3</th>
<th>Profile 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(n = 31, 11%)</strong></td>
<td><strong>(n = 133, 47%)</strong></td>
<td><strong>(n = 70, 25%)</strong></td>
<td><strong>(n = 47, 17%)</strong></td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td><strong>Intelligence</strong></td>
<td><strong>Dedication</strong></td>
<td><strong>Dynamism</strong></td>
</tr>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>-1.04</td>
<td>.90</td>
<td>-.38</td>
<td>.78</td>
</tr>
<tr>
<td>-1.49</td>
<td>.92</td>
<td>-.24</td>
<td>.75</td>
</tr>
<tr>
<td>-1.88</td>
<td>.68</td>
<td>-.22</td>
<td>.62</td>
</tr>
<tr>
<td>-1.40</td>
<td>.72</td>
<td>-.33</td>
<td>.73</td>
</tr>
<tr>
<td>.40</td>
<td>.79</td>
<td>.35</td>
<td>.74</td>
</tr>
<tr>
<td>.20</td>
<td>.82</td>
<td>.25</td>
<td>.74</td>
</tr>
<tr>
<td>-1.88</td>
<td>.72</td>
<td>-.23</td>
<td>.65</td>
</tr>
<tr>
<td>-1.11</td>
<td>.85</td>
<td>-.30</td>
<td>.70</td>
</tr>
<tr>
<td>-1.23</td>
<td>.77</td>
<td>-.40</td>
<td>.79</td>
</tr>
<tr>
<td>.32</td>
<td>.82</td>
<td>.07</td>
<td>.89</td>
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<tr>
<td>.69</td>
<td>.79</td>
<td>.36</td>
<td>.81</td>
</tr>
<tr>
<td>1.28</td>
<td>1.11</td>
<td>.18</td>
<td>1.00</td>
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</table>

To further illustrate the patterns of mean endorsement of each of the 12 ILT dimensions assigned to each profile, a line graph depicting the standardized dimension means for the four latent profiles is shown in Figure 1. Separated latent profile graphs are shown in Figures 2 through 5, one for each ILT profile. Each graph depicts the average, standardized endorsement ratings of leader characteristics for that profile. In these figures, a positive score indicates that individuals in that group endorsed that dimension at a higher magnitude than
the mean score on that dimension, while a negative score indicates individuals endorsed that dimension at a lower magnitude than the mean score on that dimension.

Figure 1. Standardized scores for ILTs by latent profile.
**ILT latent profile 1.** Figure 2 depicts the mean profile for members in the first latent profile \((n = 31, \ 11\% \ of \ total)\). This profile has the lowest values for the dimensions of Sensitivity, Intelligence, Dedication, Dynamism, Industry, Enthusiasm, and Good Citizen; and the highest values for Incompetence. This profile had similar scores for Conformity with Profiles 2 and 3, which were close to the mean. Scores for Tyranny and Masculinity were also close to the mean. This ILT profile was the smallest of the four profiles.

*Figure 2. Standardized scores for ILT latent profile 1.*
**ILT latent profile 2.** Figure 3 depicts the mean profile for members in the second latent profile ($n = 133, 47\%$ of total). Profile 2 was the largest of the four profiles, and had all dimension scores fairly close to average—no scores were more than $\pm .50$ standard deviations from the mean.

*Figure 3. Standardized scores for ILT latent profile 2.*
**ILT latent profile 3.** Figure 4 depicts the mean profile for members in the third latent profile ($n = 70$, 25% of total). Profile 3 had the lowest scores for the dimensions of Tyranny and Masculinity, and Insubordination. Similar to the fourth profile, scores for Sensitivity, Intelligence, Dedication, Dynamism, Industry, Enthusiasm, Good Citizen were higher than average.

*Figure 4. Standardized scores for ILT latent profile 3.*
**ILT latent profile 4.** Figure 5 depicts the mean profile for members in the fourth latent profile \((n = 47, \text{17\% of total})\). Similar to the Profile 3, Profile 4 had higher than average scores for Sensitivity and Good Citizen, and the highest scores on the dimensions of Intelligence, Dedication, Dynamism, Industry, and Enthusiasm. This profile differed the most from Profile 3 on the dimensions of Tyranny, Masculinity, and Insubordination—Profile 4 had much higher scores than Profile 3.

![Figure 5. Standardized scores for ILT latent profile 4.](image)

**IFT profiles.** For the LPA conducted to determine IFT profiles, a two-profile model was initially specified, and profiles were successively added. Upon the addition of an eighth profile, issues of non-convergence arose. The six previous multi-class models were compared
to determine which was the most appropriate. All profiles had a significant BLRT value, and
the lowest BIC value was for the three-profile model, followed by the six-profile model.
However, because the LMR could underestimate the number of profiles (Tein, et al., 2013),
of the profiles with a significant LMR value, the solution with the highest number or profiles,
the six-profile model, was determined to be the most appropriate. The significance of the
LMR value indicates that the six-profile model had a significant improvement in model fit
compared to the five-profile model. The six-profile solution also assigned participants
unambiguously to their respective profiles based on the posterior probabilities. Fit indices for
IFT profiles are provided in Table 6 and posterior probabilities for the final six-profile
solution are provided in Table 7.

Table 6

<table>
<thead>
<tr>
<th>Number of Profiles</th>
<th>BIC</th>
<th>LMR value</th>
<th>p</th>
<th>BLRT value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>10597.38</td>
<td>673.98</td>
<td>&lt;.01</td>
<td>-5535.97</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>3</td>
<td>10027.69</td>
<td>368.67</td>
<td>.01</td>
<td>-5059.73</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>4</td>
<td>10425.42</td>
<td>139.81</td>
<td>.69</td>
<td>-5105.96</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>5</td>
<td>10413.21</td>
<td>84.36</td>
<td>.23</td>
<td>-5035.10</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>6</td>
<td>10407.51</td>
<td>77.55</td>
<td>.04</td>
<td>-4992.15</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>7</td>
<td>10411.17</td>
<td>68.70</td>
<td>.79</td>
<td>-4952.85</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Table 7
Classification posterior probabilities for the six-profile IFT model for most likely latent class membership (row) by latent class (column)

<table>
<thead>
<tr>
<th></th>
<th>Profile 1</th>
<th>Profile 2</th>
<th>Profile 3</th>
<th>Profile 4</th>
<th>Profile 5</th>
<th>Profile 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile 1</td>
<td><strong>0.94</strong></td>
<td>0.00</td>
<td>0.01</td>
<td>0.02</td>
<td>0.04</td>
<td>0.00</td>
</tr>
<tr>
<td>Profile 2</td>
<td>0.00</td>
<td><strong>0.89</strong></td>
<td>0.00</td>
<td>0.09</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Profile 3</td>
<td>0.01</td>
<td>0.00</td>
<td><strong>0.93</strong></td>
<td>0.00</td>
<td>0.06</td>
<td>0.00</td>
</tr>
<tr>
<td>Profile 4</td>
<td>0.01</td>
<td>0.04</td>
<td>0.00</td>
<td><strong>0.91</strong></td>
<td>0.05</td>
<td>0.00</td>
</tr>
<tr>
<td>Profile 5</td>
<td>0.01</td>
<td>0.00</td>
<td>0.03</td>
<td>0.05</td>
<td><strong>0.88</strong></td>
<td>0.03</td>
</tr>
<tr>
<td>Profile 6</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.07</td>
<td><strong>0.93</strong></td>
</tr>
</tbody>
</table>

Note. Values in bold along the diagonal are the average posterior probabilities associated with the profiles to which individuals were assigned.

To address Research Question 4, which asked about the nature of each IFT profile in terms of multivariate pattern, Table 8 provides the standardized means and standard deviations for each of the 12 IFT dimensions to provide the average pattern for each profile. Table 8 also indicates the percent of the sample assigned to each IFT profile to address Research Question 6, which asked about the nature of each IFT profile in terms of frequency of occurrence.
Table 8
LPA sample proportions, standardized mean values, and standard deviations for IFT profiles

<table>
<thead>
<tr>
<th>Profile</th>
<th>Profile 1 (n = 18, 6%)</th>
<th>Profile 2 (n = 24, 9%)</th>
<th>Profile 3 (n = 73, 26%)</th>
<th>Profile 4 (n = 73, 26%)</th>
<th>Profile 5 (n = 68, 24%)</th>
<th>Profile 6 (n = 25, 9%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>.43</td>
<td>.95</td>
<td>-1.23</td>
<td>.81</td>
<td>.84</td>
<td>.67</td>
</tr>
<tr>
<td>Intelligence</td>
<td>-0.98</td>
<td>1.03</td>
<td>-.44</td>
<td>.82</td>
<td>.87</td>
<td>.80</td>
</tr>
<tr>
<td>Dedication</td>
<td>-.05</td>
<td>1.02</td>
<td>1.09</td>
<td>.69</td>
<td>.98</td>
<td>.51</td>
</tr>
<tr>
<td>Dynamism</td>
<td>-1.17</td>
<td>0.78</td>
<td>-.40</td>
<td>0.59</td>
<td>.94</td>
<td>.70</td>
</tr>
<tr>
<td>Tyranny</td>
<td>-.96</td>
<td>.55</td>
<td>1.24</td>
<td>.71</td>
<td>-.82</td>
<td>.54</td>
</tr>
<tr>
<td>Masculinity</td>
<td>-1.42</td>
<td>.89</td>
<td>-.30</td>
<td>.71</td>
<td>-.23</td>
<td>1.12</td>
</tr>
<tr>
<td>Industry</td>
<td>.67</td>
<td>.64</td>
<td>-1.52</td>
<td>.96</td>
<td>.75</td>
<td>.72</td>
</tr>
<tr>
<td>Enthusiasm</td>
<td>-.22</td>
<td>1.12</td>
<td>-.54</td>
<td>.83</td>
<td>.54</td>
<td>.98</td>
</tr>
<tr>
<td>Good Citizen</td>
<td>.76</td>
<td>.78</td>
<td>-1.37</td>
<td>.90</td>
<td>.82</td>
<td>.67</td>
</tr>
<tr>
<td>Conformity</td>
<td>-.10</td>
<td>1.37</td>
<td>-.41</td>
<td>.70</td>
<td>-.11</td>
<td>1.14</td>
</tr>
<tr>
<td>Insubordination</td>
<td>-.66</td>
<td>.67</td>
<td>1.40</td>
<td>1.04</td>
<td>-.76</td>
<td>.80</td>
</tr>
<tr>
<td>Incompetence</td>
<td>-.46</td>
<td>.81</td>
<td>.82</td>
<td>.67</td>
<td>-.73</td>
<td>.98</td>
</tr>
</tbody>
</table>
To further illustrate the patterns of mean endorsement of each of the 12 IFT dimensions assigned to each profile, a line graph depicting the standardized dimension means for the six latent profiles is shown in Figure 6. Separated latent profile graphs are shown in Figures 7 through 12, one for each of the six IFT profiles. Each graph depicts the average, standardized endorsement ratings of follower characteristics for that profile. In these graphs, a positive score indicates that individuals in that group endorsed that dimension at a higher magnitude than the mean score on that dimension, while a negative score indicates individuals endorsed that dimension at a lower magnitude than the mean score on that dimension.

Figure 6. Standardized scores for IFTs by latent profile.
**IFT latent profile 1.** Figure 7 depicts the mean profile for members in the first latent profile \((n = 18, 6\% \text{ of total})\). Profile 1 is the smallest of the IFT profiles, and has higher scores for the dimensions of Sensitivity, Industry, and Good Citizen. This IFT profile has lower scores for the dimensions of Insubordination and Incompetence, and the lowest scores for the dimensions of Intelligence, Dynamism, Tyranny, and Masculinity. The scores for Dedication and Enthusiasm are close to average.

*Figure 7. Standardized scores for IFT latent profile 1.*
**IFT latent profile 2.** Figure 8 depicts the mean profile for members in the second latent profile \((n = 24, 9\% \text{ of total})\). The second IFT profile had the lowest scores for Sensitivity, Dedication, Industry, and Good Citizen; and the highest scores for Insubordination and Incompetence. IFT Profile 2 also had a high score for Tyranny, but it was lower than that of the Tyranny score for Profile 6. Profile 2 scores for the dimensions of Intelligence, Dynamism, Masculinity, and Conformity were somewhat close to average.

*Figure 8. Standardized scores for IFT latent profile 2.*
**IFT latent profile 3.** Figure 9 depicts the mean profile for members in the third latent profile \( (n = 73, \, 26\% \, \text{of total}) \). The third IFT profile had high scores on the dimensions of Dynamism and Enthusiasm, and the highest scores on the dimensions of Sensitivity, Intelligence, Dedication, and Industry. Profile 3 also had low scores on Tyranny, and the lowest scores on Insubordination and Incompetence. The scores for Masculinity and Conformity were close to average.

*Figure 9. Standardized scores for IFT latent profile 3.*
**IFT latent profile 4.** Figure 10 depicts the mean profile for members in the fourth latent profile ($n = 73$, 26% of total). The dimension scores for ILT Profile 4 were all just slightly under the average, except for Masculinity and Conformity, which were average, and the scores on Insubordination and Incompetence were just above average.

*Figure 10.* Standardized scores for IFT latent profile 4.
**IFT latent profile 5.** Figure 11 depicts the mean profile for members in the fifth latent profile ($n = 68$, 24% of total). For ILT Profile 5, scores on all dimensions were average—within .4 standard deviation away from the mean.

*Figure 11. Standardized scores for IFT latent profile 5.*
**IFT latent profile 6.** Figure 12 depicts the mean profile for members in the sixth latent profile \((n = 25, 9\% \text{ of total})\). IFT Profile 6 had high scores on the dimensions of Dynamism and Masculinity, and the highest scores on the dimensions of Tyranny and Enthusiasm. The scores on the remaining dimensions were all just slightly above the average.

*Figure 12. Standardized scores for IFT latent profile 6.*

**Research Questions 7 and 8**

The seventh and eighth research questions, regarding the relation between each ILT (RQ 7) and IFT (RQ 8) profile and gender were addressed with chi-square contingency tables to determine how each of the profiles relates with gender. For RQ7, results indicated that there was no relation between ILT profile membership and gender, \(\chi^2 (3, N = 279) = 4.45, p\)
= .22. Similarly, for RQ8, results indicated that there was no relation between IFT profile membership and gender, \( \chi^2(5, N = 279) = 4.85, p = .43 \).

**Research Questions 9 and 10**

The ninth and tenth research questions, regarding the relation between each ILT (RQ 9) and IFT (RQ 10) profile and personality were addressed with analysis of variance (ANOVA) to determine how each of the profiles relate with the five personality variables. In each case, a significant omnibus test result was followed with post hoc tests for pairwise comparisons among the profiles using the Ryan-Einot-Gabriel-Welch procedure (REGWQ) with an alpha level of .05 (Wuensch, 2015).

**ILT profile membership and personality.** Table 9 provides the mean scores on respondents’ personality variables for each of the ILT profiles. Figure 13 illustrates the differences in personality for each of the ILT profiles based on standardized scores on the personality variables.

<table>
<thead>
<tr>
<th>Table 9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Scores on Big 5 Personality Variables by ILT Profile</strong></td>
</tr>
<tr>
<td>Extraversion</td>
</tr>
<tr>
<td>ILT Profile 1</td>
</tr>
<tr>
<td>ILT Profile 2</td>
</tr>
<tr>
<td>ILT Profile 3</td>
</tr>
<tr>
<td>ILT Profile 4</td>
</tr>
</tbody>
</table>

**Note.** Means sharing a letter in their superscript in the same column are not significantly different at the .05 level according to REGWQ tests.
Figure 13. Standardized scores on the personality dimensions for each of the ILT profiles for which there were significant differences in the pairwise comparisons.

**ILT profile membership and extraversion.** Participants’ self-reported extraversion scores were not related to ILT profile membership, $F(3, 277) = 1.41, MSE = 3.25, p = .37, \eta^2 = .01, 90\% CI [0, .03].$

**ILT profile membership and agreeableness.** Participants’ self-reported agreeableness scores were related to ILT profile membership, $F(3, 277) = 13.66, MSE = 1.30, p < .001, \eta^2 = .13, 90\% CI [.07, .18].$ This large effect size suggests 15\% of the variance in agreeableness is associated with ILT profile membership. As shown in Table 9 and illustrated in Figure 13, ILT Profiles 1 and 2 had significantly lower scores on agreeableness than did ILT Profiles 3 and 4.
**ILT profile membership and conscientiousness.** Participants’ self-reported conscientiousness scores were related to ILT profile membership, $F(3, 277) = 8.42$, $MSE = 1.20, p < .001, \eta^2 = .08, 90\% CI [.03, .13]$. This medium-large effect size suggests 9\% of the variance in conscientiousness is associated with ILT profile membership. As shown in Table 9 and illustrated in Figure 13, ILT Profile 1 had a significantly lower score on conscientiousness than did the other three ILT profiles.

**ILT profile membership and emotional stability.** Participants’ self-reported emotional stability scores were related to ILT profile membership, $F(3, 277) = 4.68$, $MSE = 2.48, p = .003, \eta^2 = .05, 90\% CI [.01, .09]$. This medium effect size suggests 5\% of the variance in emotional stability is associated with ILT profile membership. As shown in Table 9 and illustrated in Figure 13, ILT Profile 1 had a significantly lower score on emotional stability than Profiles 3 and 4.

**ILT profile membership and openness.** Participants’ self-reported openness to experience scores were not related to ILT profile membership, $F(3, 277) = 2.06$, $MSE = 1.72, p = .11, \eta^2 = .02, 90\% CI [0, .05]$.

**IFT profile membership and personality.** Table 10 provides the mean scores on respondents’ personality variables for each of the IFT profiles. Figure 14 illustrates the differences in personality for each of the ILT profiles based on standardized scores on the personality variables.
Table 10  
*Mean Scores on Big 5 Personality Variables by IFT Profile*

<table>
<thead>
<tr>
<th>IFT Profile</th>
<th>Extraversion</th>
<th>Agreeableness</th>
<th>Conscientiousness</th>
<th>Emotional Stability</th>
<th>Openness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.64</td>
<td>6.03&lt;sup&gt;B&lt;/sup&gt;</td>
<td>5.94&lt;sup&gt;B&lt;/sup&gt;</td>
<td>5.47</td>
<td>5.00</td>
</tr>
<tr>
<td>2</td>
<td>4.23</td>
<td>4.88&lt;sup&gt;A&lt;/sup&gt;</td>
<td>5.21&lt;sup&gt;AB&lt;/sup&gt;</td>
<td>4.73</td>
<td>5.17</td>
</tr>
<tr>
<td>3</td>
<td>4.31</td>
<td>5.87&lt;sup&gt;B&lt;/sup&gt;</td>
<td>6.03&lt;sup&gt;B&lt;/sup&gt;</td>
<td>5.45</td>
<td>5.63</td>
</tr>
<tr>
<td>4</td>
<td>3.60</td>
<td>5.32&lt;sup&gt;A&lt;/sup&gt;</td>
<td>5.60&lt;sup&gt;AB&lt;/sup&gt;</td>
<td>5.02</td>
<td>5.14</td>
</tr>
<tr>
<td>5</td>
<td>3.85</td>
<td>5.60&lt;sup&gt;AB&lt;/sup&gt;</td>
<td>5.82&lt;sup&gt;AB&lt;/sup&gt;</td>
<td>5.40</td>
<td>5.29</td>
</tr>
<tr>
<td>6</td>
<td>3.80</td>
<td>5.36&lt;sup&gt;AB&lt;/sup&gt;</td>
<td>5.10&lt;sup&gt;A&lt;/sup&gt;</td>
<td>4.84</td>
<td>5.10</td>
</tr>
</tbody>
</table>

*Note.* Means sharing a letter in their superscript in the same column are not significantly different at the .05 level according to REGWQ tests.

*Figure 14.* Standardized scores on the personality dimensions for each of the IFT profiles for which there were significant differences in the pairwise comparisons.
**IFT profile membership and extraversion.** Participants’ self-reported extraversion scores were not related to IFT profile membership, $F(5, 275) = 1.41, MSE = 3.23, p = .22, \eta^2 = .03, 90\% \text{ CI}[0, .05].$

**IFT profile membership and agreeableness.** Participants’ self-reported agreeableness scores were related to IFT profile membership, $F(5, 275) = 3.92, MSE = 1.41, p = .002, \eta^2 = .07, 90\% \text{ CI}[.02, .10].$ This medium effect size suggests 8\% of the variance in agreeableness is associated with IFT profile membership. As shown in Table 10 and illustrated in Figure 14, IFT Profiles 2 and 4 had significantly lower scores on agreeableness than did IFT Profiles 1 and 3.

**IFT profile membership and conscientiousness.** Participants’ self-reported conscientiousness scores were related to ILT profile membership, $F(5, 275) = 4.16, MSE = 1.22, p = .001, \eta^2 = .07, 90\% \text{ CI}[.02, .11].$ This medium effect size suggests 8\% of the variance in conscientiousness is associated with IFT profile membership. As shown in Table 10 and illustrated in Figure 14, IFT Profile 6 had significantly lower conscientiousness than did Profiles 1 and 3.

**IFT profile membership and emotional stability.** Participants’ self-reported emotional stability scores were not related to IFT profile membership, $F(5, 275) = 1.51, MSE = 2.55, p = .19, \eta^2 = .03, 90\% \text{ CI}[0, .05].$

**IFT profile membership and openness.** Participants’ self-reported openness to experience scores were not related to IFT profile membership, $F(5, 275) = 1.50, MSE = 1.73, p = .19, \eta^2 = .03, 90\% \text{ CI}[0, .05].$
Research Questions 11 and 12

The last two research questions were addressed using a chi-square contingency table to determine whether a relationship exists between individuals’ ILTs and IFTs. Analysis of the omnibus contingency table indicated there is evidence of a relationship between individuals’ ILT and IFT profile membership, $\chi^2 (15, N = 281) = 115.62, p < .001$, Cramér’s $V = .37$ (medium sized effect).

Post hoc analyses were conducted by investigating the adjusted residuals in the contingency table (see Table 11). Based on recommendations by MacDonald and Gardner (2000), the alpha for evaluating the adjusted residuals was set at .002, which translates to a critical value of ±2.9. The alpha value is calculated by dividing .05 by the number of cells in the table (24). As seen in Table 11, several inferences can be made based on the adjusted residuals:

- Individuals with IFT Profile 1 were more likely to have ILT Profile 4 (see Figure 15).
- Individuals with IFT Profile 2 were more likely to have ILT Profile 1 (see Figure 16).
- Individuals with IFT Profile 3 were more likely to have ILT Profiles 3 or 4 and were less likely to have ILT Profiles 1 or 2 (see Figure 17).
- Individuals with IFT Profile 4 were less likely to have ILT Profile 4.
- Individuals were IFT Profile 5 were more likely to have ILT Profile 2 and were less likely to have ILT Profile 3 (see Figure 18).
Table 11
Contingency table for ILT profile by IFT profile

<table>
<thead>
<tr>
<th>IFT Profile 1</th>
<th>IFT Profile 2</th>
<th>IFT Profile 3</th>
<th>IFT Profile 4</th>
<th>IFT Profile 5</th>
<th>IFT Profile 6</th>
<th>Marginals</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILT Profile 1</td>
<td>Observed</td>
<td>1</td>
<td>10</td>
<td>0</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Expected</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>% within IFT Profile</td>
<td>6%</td>
<td>42%</td>
<td>0%</td>
<td>19%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Adjusted Residual</td>
<td>-0.8</td>
<td>5.0</td>
<td>-3.5</td>
<td>2.6</td>
<td>-2.4</td>
</tr>
<tr>
<td>ILT Profile 2</td>
<td>Observed</td>
<td>6</td>
<td>10</td>
<td>14</td>
<td>43</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Expected</td>
<td>9</td>
<td>11</td>
<td>35</td>
<td>35</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>% within IFT Profile</td>
<td>33%</td>
<td>42%</td>
<td>19%</td>
<td>59%</td>
<td>71%</td>
</tr>
<tr>
<td></td>
<td>Adjusted Residual</td>
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<td>-0.6</td>
<td>-5.6</td>
<td>2.3</td>
<td>4.4</td>
</tr>
<tr>
<td>ILT Profile 3</td>
<td>Observed</td>
<td>10</td>
<td>2</td>
<td>36</td>
<td>12</td>
<td>7</td>
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<tr>
<td></td>
<td>Expected</td>
<td>4</td>
<td>6</td>
<td>18</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>% within IFT Profile</td>
<td>56%</td>
<td>8%</td>
<td>49%</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Adjusted Residual</td>
<td>3.1</td>
<td>-2.0</td>
<td>5.6</td>
<td>-1.9</td>
<td>-3.2</td>
</tr>
<tr>
<td>ILT Profile 4</td>
<td>Observed</td>
<td>1</td>
<td>2</td>
<td>23</td>
<td>4</td>
<td>11</td>
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<tr>
<td></td>
<td>Expected</td>
<td>3</td>
<td>4</td>
<td>12</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>% within IFT Profile</td>
<td>6%</td>
<td>8%</td>
<td>32%</td>
<td>5%</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>Adjusted Residual</td>
<td>-1.3</td>
<td>-1.2</td>
<td>3.9</td>
<td>-3.0</td>
<td>-0.1</td>
</tr>
<tr>
<td>Marginals</td>
<td>18</td>
<td>24</td>
<td>73</td>
<td>73</td>
<td>68</td>
<td>25</td>
</tr>
</tbody>
</table>

Note. Adjusted residuals in bold are those that exceed the critical value of ±2.9.
**Figure 15.** Standardized dimension scores for IFT Profile 1 and ILT Profile 3.

**Figure 16.** Standardized dimension scores for IFT Profile 2 and ILT Profile 1.
Figure 17. Standardized dimension scores for IFT Profile 3 and ILT Profiles 3 and 4.

Figure 18. Standardized dimension scores for IFT Profile 4 and ILT Profile 2.
Discussion

There has been substantial research published on implicit leadership theories over the last few decades and research on implicit followership theories is starting to garner interest; however, only a handful of studies have examined ILTs and IFTs together. Of the research that has been done in these areas, the vast majority of the studies have been variable-oriented, and have focused on the individual traits that comprise the implicit theories rather than on the pattern of traits, which allows for examining aspects of a person as a whole rather than as discrete parts. The current study contributes to the literature by using a pattern-oriented approach, which presented a way to classify people into groups based on their patterns of ILT and IFT characteristics, making group membership the focus rather than the characteristics.

The primary aim of the current study was to examine the relation between individuals’ ILTs and IFTs. This was done by first identifying the four ILT profiles and six IFT profiles among respondents using latent profile analysis based on 12 dimensions of leaders and followers. The nature of these profiles was examined in terms of multivariate pattern and frequency of occurrence. No differences for rater gender were observed between the ILT profiles or between the IFT profiles, but rater personality did appear to have a relationship with profile membership. Finally, contingency table analysis indicated that the ILT profiles that co-occurred with IFT profiles were similar in terms of multivariate pattern and in terms of the magnitude of endorsement for the characteristics rated.
Nature of ILT Profiles and Rater Personality

Latent profile analysis was conducted to determine ILT profile membership using respondents’ ratings of leaders on the 12 dimensions that had previously been used separately to identify ILTs and IFTs: Sensitivity, Intelligence, Dedication, and Dynamism, Tyranny, Masculinity, Industry, Enthusiasm, Good Citizen, Conformity, Insubordination, and Incompetence. Four distinct ILT profiles were identified as best fitting the data.

Respondents with ILT Profile 1 characterized a typical leader as someone who is not sensitive, intelligent, dedicated, dynamic, industrious, enthusiastic, or a good citizen, and someone who is incompetent. This group of respondents were also the least agreeable, conscientious, and emotionally stable. Respondents with ILT Profile 2 characterized a typical leader as someone who is average on all 12 dimensions examined. This was the largest group and it is possible members of this group averaged their positive and negative experiences with leaders. This group was significantly less agreeable than respondents with ILT Profiles 3 or 4, but significantly more conscientious and emotionally stable than respondents with ILT Profile 1. Respondents with ILT Profile 3 characterized a typical leader as someone who is more sensitive, intelligent, dedicated, dynamic, industrious, enthusiastic, and good citizens than average, and as someone who is not tyrannical, masculine, or insubordinate. This group was significantly more conscientious and emotionally stable than respondents with ILT Profile 1, and significantly more agreeable than respondents with ILT Profiles 1 or 2.
Similar to respondents with ILT Profile 3, respondents with ILT Profile 4 characterized a typical leader as someone who is intelligent, dedicated, dynamic, industrious, and enthusiastic. This group also characterized leaders as more sensitive and good citizens than average. This group had comparable personality scores to respondents with ILT Profile 3, as they were significantly more conscientious and emotionally stable than respondents with ILT Profile 1, and significantly more agreeable than respondents with ILT Profiles 1 or 2. However, in contrast to respondents with ILT Profile 3, respondents with ILT Profile 4 characterized leaders as tyrannical and masculine.

The results of the relationship between raters’ scores on the dimensions within the ILT profiles and rater personality are somewhat consistent with the results of one study that examined rater personality traits and their ILTs. Keller (2003) found that rater agreeableness positively related to their endorsement of leader sensitivity and negatively related to their endorsement of leader tyranny, and that conscientiousness positively related to their endorsement of leader dedication. It should be noted that while Keller’s study directly examined the relationship between rater personality traits and ILT dimensions, the present study incorporated ILT dimensions as descriptive of raters’ ILT profiles.

**Nature of IFT Profiles and Rater Personality**

Latent profile analysis was conducted to determine IFT profile membership using respondents’ ratings of followers on the same 12 dimensions used to determine
ILT membership in the present study. Six distinct IFT profiles were identified as best fitting the data.

Respondents with IFT Profile 1 characterized a follower as someone who is more sensitive, industrious, and good citizen than average, and as someone who is less insubordinate and incompetent than average. Respondents with this profile also characterized a follower as someone who is not intelligent, dynamic, tyrannical, or masculine. This group was significantly more agreeable than respondents with IFT Profiles 2 or 4, and significantly more conscientious than respondents with IFT Profile 6. Respondents with IFT Profile 2 characterized followers as insubordinate and incompetent, and as not sensitive, dedicated, industrious, or good citizens. They also characterized followers as more tyrannical than average. This group was significantly less agreeable than respondents with IFT Profiles 1 or 3. Respondents with IFT Profile 3 characterized followers as more sensitive, intelligent, dedicated and industrious than those with other IFT profiles, and as more dynamic and enthusiastic than average. They also characterized followers as not insubordinate, incompetent, or tyrannical. This group was significantly more agreeable than respondents with IFT Profiles 2 or 4, and significantly more conscientious than respondents with IFT Profile 6. Respondents with IFT Profiles 4 and 5 both characterized followers as average on all dimensions. Those with IFT Profile 4 characterized followers with slightly lower scores for all the dimensions than did respondents with Profile 5, except for insubordination and incompetence, which were rated just slightly higher by those with IFT Profile 4.
Respondents with IFT Profile 4 were significantly less agreeable than those with IFT Profiles 1 or 3. Respondents with IFT Profile 6 characterized followers as more dynamic and masculine than average, and as more tyrannical and enthusiastic than respondents with all other IFT profiles. This group was less conscientious than respondents with IFT Profiles 1 or 3.

**Relation Between ILT Profiles and IFT Profiles**

Contingency tables were analyzed to determine the relation between respondents’ ILT profiles and their IFT profiles. As illustrated in Figures 15 through 18, ILT profiles that co-occurred with IFT profiles were similar in pattern and in the magnitude of endorsement of the characteristics rated.

Respondents with IFT Profile 1 were also more likely to have ILT Profile 3. This conscientious group of respondents characterized both leaders and followers as sensitive, industrious, good citizens, and not tyrannical or masculine. The difference in the profile patterns for this group was that the members of this group characterized leaders as more intelligent and dynamic than average and followers as less intelligent and dynamic than average. Respondents with IFT Profile 2, one of the smaller IFT groups, were more also more likely to have ILT Profile 1, the smallest of the ILT groups. This group of less agreeable respondents characterized both leaders and followers as not sensitive, dedicated, industrious, or good citizens, and as incompetent. Respondents with IFT Profile 3, one of the largest IFT groups, were also more likely to have ILT Profile 3 or ILT Profile 4. This group of agreeable, conscientious respondents
characterized both leaders and followers as sensitive, intelligent, dedicated, dynamic, industrious, and enthusiastic. While Respondents with IFT Profile 3 and ILT Profile 3 both characterized leaders and followers as much less insubordinate or tyrannical than average, respondents with ILT Profile 4 characterized leaders as more tyrannical and masculine than average. Respondents with IFT Profile 5, one of the largest IFT groups, were also more likely to have ILT Profile 2, which was the largest ILT group. This group of respondents characterized both leaders and followers as fairly average on all twelve dimensions.

Theoretical, Research, and Practical Implications

The primary theoretical contribution of this study is that many individuals appear to have very similar expectations for leaders and followers, i.e. similar patterns and magnitude of endorsement of leader and follower characteristics. Similarities in workers’ cognitive schemata for leaders and followers raise the question of whether people really do hold distinct schemata for the two groups, or whether there might be more general “coworker” schemata that apply regardless of whether the perceptual target is a leader or a follower. However, even when the ILT profile and IFT profile patterns were similar, they were not identical and varied on key dimensions, such as tyranny and intelligence. The differences suggest that, in some cases, individuals do have two distinct ways in which they characterize leader and follower attributes. There may be some characteristics that individuals could perceive as aspects of employees in general, such as sensitivity, dedication, or industriousness; while other characteristics,
such as tyranny or incompetence, are what help people distinguish between leaders and followers.

The findings from this study have two major implications for research and methodology. First, this is the first study to address both ILTs and IFTs at once, and from a pattern-oriented perspective (to the best of the author’s knowledge). Because ILTs and IFTs are conceptually described as sets of attributes that comprise a whole (Epitropaki & Martin, 2004; Javidan et al., 2006; Lord et al., 1984), using methodology that supports a pattern-oriented approach, such as latent profile analysis, in order to describe ILTs and IFTs, is more consistent with the original conception of implicit theories as arrays containing multiple characteristics than focusing separately on the discrete components of the ILTs or IFTs, as is typical of a variable-oriented approach. Additionally, this is the first study to use a common set of attributes on which raters could characterize both leaders and followers. Because there was a reasonable amount of overlap between individuals’ ILTs and IFTs, there may be no need for the development of two measures with separate sets of characteristics; just one measure with the same set of characteristics can capture both ILTs and IFTs.

In terms of practical implications, findings from this study could be used to better understand selection and promotion decisions within organizations, and offers of leadership opportunities within teams. If an open position is being filled with a candidate whose attributes are more congruent with the recruiter or hiring manager’s ILT or IFT profile, depending on the position, instead of the candidate’s alignment with
the requirements of the role, there may be detrimental consequences for team
performance, and potentially legal consequences if qualified rejected candidates think
they have been discriminated against. Similarly, if there are leadership opportunities
within a team, a manager may choose a team member whose attributes appear to align
with the manager’s ILT profile rather than the manager’s IFT profile to lead the project,
instead of the most qualified person on the team. People in organizations who are
making administrative decisions regarding selection, promotions, and leadership
opportunities can be trained to differentiate between thinking a candidate is a good fit
for a position because of the candidate’s qualifications and thinking a candidate is a
good fit because the candidate’s attributes align with the decision maker’s ILT or IFT
profile.

**Limitations and Future Research**

Sample demographics indicate a reasonably diverse set of participants were
included in the present study based on gender, managerial experience, and industry;
though the Hispanic, Black or African American, and American Indian populations
were not represented enough to make conclusions about the ethnic or racial
generalizability of the results. Additionally, this sample was limited to full-time adult
employees working in the United States. Because no study results have yet been able to
apply a full set of leadership characteristics across a wide range of cultures (Den Hartog
et al. 1999; Gerstner & Day, 1994; House, Hanges, Javidan, Dorfman, & Gupta, 2004),
the ILT profiles identified in the present study, or their relation with gender, personality,
and IFT profiles may not generalize to populations outside the United States. Additional research is needed with more diverse participants and participants from other cultures and countries to determine the generalizability of the structure and nature of both ILT and IFT profiles. While there has been substantial research on cultural variation in ILTs (Den Hartog et al. 1999; Gerstner & Day, 1994; House, Hanges, Javidan, Dorfman, & Gupta, 2004), this has not been the case for IFTs (Carsten, Uhl-Bien, West, Patera, & McGregor, 2010; Sy, 2010) and neither ILTs nor IFTs have been empirically studied as patterns of characteristics.

A second limitation is that the a priori factor structures of the ILT and IFT measures were used in the current study, rather than an empirically derived factor structure, which could have identified points of redundancy between dimensions. For example, the existing ILT dimension of Dedication and existing IFT dimension of Industry both include the word, “hard-working.” It is possible that the nature of the ILT and IFT profiles may be different if they are based on dimensions identified from an empirically derived factor structure rather than the a priori factor structure employed by the current study. Future research could present the same 39 characteristics used in the current study to identify an empirically derived factor structure. The empirically derived dimensions can then be used to determine ILT and IFT profile membership.

Another limitation in the study could have been variability in participants’ interpretation of the “typical leader” or “typical follower” prompt. Though this was not explicitly asked, responses to the open-ended item included statements by participants
indicating that they had endorsed the characteristics of an ideal leader or follower, rather than a typical leader or follower. Other participants indicated they had endorsed characteristics based on the average of their experiences, and yet a handful of other participants indicated they endorsed characteristics of a subpar employee. It would be difficult to discern whether the variability in the ILT or IFT profiles is due to variability in individuals’ characterization of typical leaders and followers, or if this is due to the variability in the understanding and application of the prompt regarding a typical leader or typical follower. One way future research could address this limitation is to have participants compare the ideal and typical characteristics of leaders and followers, so that if both prompts are presented in conjunction with each other, the distinction between “ideal” and “typical” is more salient. No published or available studies have compared the four perspectives (ideal and typical leader, and ideal and typical follower) together, and the relation between the four profiles would provide value to our understanding of ILTs and IFTs, especially if the four profiles were calculated from the same set of characteristics. It would also be interesting to compare these profiles to participants’ ratings of themselves on the same characteristics.

There are two additional research topics that can be addressed as an extension of the current study. First, more research on rater characteristics is needed to determine if these characteristics can predict the rater’s ILT and IFT profiles. While the current study did attempt to initiate this process, it was not the primary focus of the study. Results indicated rater gender was not related to ILT or IFT profiles. There was some
evidence of a relationship between rater personality (e.g., agreeableness, 
conscientiousness, emotional stability) and their ILT or IFT profiles; however, the 
reliability of the two-item scales for the personality dimensions ranged from .54 to .82. 
Future research can focus on rater characteristics as predictors of ILT and IFT profile 
membership using more reliable and thorough measures of personality and other rater 
characteristics, such as demographics, cognitive ability, and values. Along with 
examining these antecedents of ILT and IFT profiles, future research should also focus 
on the consequences of the relationship between ILT and IFT profiles. Can outcomes 
such as job satisfaction, performance, or retention be predicted by the congruence or 
lack of congruence between individuals’ ILT and IFT profiles?

Conclusion

The results of this study suggest that individuals’ cognitive representations of 
leaders and followers may contain very similar patterns of characteristics, but that these 
patterns are not identical and there are some distinctions. Additionally, not only did this 
study examine both ILTs and IFTs using the same measure, this study also used a 
pattern-oriented approach to understand ILTs and IFTs rather than the traditional 
variable-oriented approaches that have been used in extant literature. The pattern-
oriented approach may be better aligned to the concept of implicit theories and should 
be employed more in future studies.
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APPENDICES
Appendix A

Existing Measure of Implicit Leadership Theories

We are going to be asking you about leaders and followers in business settings. For the purpose of this study, a leader refers to an employee in a managerial position who has at least one direct report. A follower refers to an employee who reports to a manager. For some items, you may find that the characteristics are similar for both leaders and followers; while for other items you may find that leaders embody a particular characteristic more than followers, and vice versa.

To measure ILTs: How characteristic is each of the listed traits of a business leader?

Use the following scale:

To measure IFTs: How characteristic is each of the listed traits of a follower in a business setting (e.g., an employee in a non-managerial role)? Use the following scale:

<table>
<thead>
<tr>
<th>Not at all characteristic</th>
<th>Extremely characteristic</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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</table>

**LEADER PROTOTYPE**

- **Sensitivity**
  - Helpful
  - Understanding
  - Sincere

- **Intelligence**
  - Intelligent
  - Educated
  - Clever
  - Knowledgeable

- **Dedication**
  - Dedicated
  - Motivated
  - Hard-working

- **Dynamism**
  - Energetic
  - Strong
  - Dynamic

**LEADER ANTIPROTOTYPE**

- **Tyranny**
  - Domineering
  - Pushy
  - Manipulative
  - Loud
  - Conceited
  - Selfish

- **Masculinity**
  - Male
  - Masculine
Appendix B

Existing Measure of Implicit Followership Theories

We are going to be asking you about leaders and followers in business settings. For the purpose of this study, a leader refers to an employee in a managerial position who has at least one direct report. A follower refers to an employee who reports to a manager. For some items, you may find that the characteristics are similar for both leaders and followers; while for other items you may find that leaders embody a particular characteristic more than followers, and vice versa.

To measure ILTs: How characteristic is each of the listed traits of a business leader? Use the following scale:

To measure IFTs: How characteristic is each of the listed traits of a follower in a business setting (e.g., an employee in a non-managerial role)? Use the following scale:

<table>
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<tr>
<th>Not at all characteristic</th>
<th>Extremely characteristic</th>
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<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

FOLLOWERSHIP PROTOTYPE

Industry
- Hardworking
- Productive
- Goes above and beyond

Enthusiasm
- Excited
- Outgoing
- Happy

Good Citizen
- Loyal
- Reliable
- Team player

FOLLOWERSHIP ANTIPROTOTYPE

Conformity
- Easily influenced
- Follows trends
- Soft-spoken

Insubordination
- Arrogant
- Rude
- Bad-tempered

Incompetence
- Uneducated
- Slow
- Inexperienced
Appendix C

Ten-Item Personality Inventory

Here are a number of personality traits that may or may not apply to you. Please use the rating scale below to indicate the extent to which you agree or disagree with each statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

<table>
<thead>
<tr>
<th>Disagree strongly</th>
<th>Disagree moderately</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree moderately</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

I see myself as:

| 1. Extraverted, enthusiastic. | Extraversion |
| 2. Critical, quarrelsome. | Agreeableness – reverse scored |
| 3. Dependable, self-disciplined. | Conscientiousness |
| 5. Open to new experiences, complex. | Open to Experiences |
| 6. Reserved, quiet. | Extraversion – reverse scored |
| 7. Sympathetic, warm. | Agreeableness |
| 8. Disorganized, careless. | Conscientiousness – reverse scored |
| 10. Conventional, uncreative. | Open to Experiences – reverse scored |

The content in this column was not visible to the participant.
Appendix D

Dissertation Proposal

Examining the Relation Between Individuals’ Implicit Leadership Theories and Implicit Followership Theories

by
Ruchi Patel

A dissertation proposal submitted to the Graduate Faculty of North Carolina State University in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Psychology

Raleigh, North Carolina 2017

APPROVED BY:

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Committee Member

Dr. Kevin Oliver
Committee Member
Examining the Relation Between Individuals’ Implicit Leadership Theories and Implicit Followership Theories

Organizational research has long focused on the importance of leaders to various follower and organization outcomes, as leaders have the responsibility of making decisions for the well-being of their employees and for their organizations to adjust and thrive in competitive environments (Hogan & Kaiser, 2005; Waldman & Yammarino, 1999). More specifically, results of this research have shown that leaders have an impact on follower performance, follower job satisfaction, follower motivation (Harter, Schmidt, & Hayes, 2002; Judge and Piccolo, 2004; Judge, Piccolo, & Ilies, 2004), group cooperation, organizational culture (Peterson, Smith, Martorana, & Owens, 2003), and the success of strategic initiatives (Burgelman, 1983; Guth & Macmillan, 1986; Hackman & Wageman, 2005; O’Reilly, Caldwell, Chatman, Lapiz, & Self, 2009; Podolny, Khurana, & Hill-Popper, 2005; Wooldridge & Floyd, 1990); as well as business outcomes such as return on assets, return on investment, and income and sales growth (Peterson et al., 2003).

Though the majority of leadership research has focused on the attributes or style of the leader, with the inception of implicit theories in psychology, researchers started to examine the idea that leaders’ effectiveness may depend on both attributes within the leader, and also on the characteristics the beholder finds important (Rush, Thomas, & Lord, 1977; Lord, Foti, & de Vader, 1984). The set of characteristics individuals consider important for leadership are referred to as their implicit leadership theories (ILTs). Similarly, individuals also have implicit followership theories (IFTs), which are the assumptions people hold about
the characteristics of followers (Sy, 2010). While research on ILTs and IFTs has had conceptual and procedural overlap, there has been scant research that examines each in the context of the other. The proposed study will attempt to bridge the gap between the parallel streams of research by examining the same set of attributes that individuals may endorse for their ILTs or IFTs.

The Study of Leadership

From a psychological perspective, leadership generally refers to a process of social influence where a leader influences others to perform tasks contributing to a specific group goal—in the context of this paper, the success of an organization (Hogan, Curphy, & Hogan, 1994; Judge et al., 2002). Leadership research has varied over the last several decades as different perspectives have garnered interest. The most prominent approaches have consistently been leader-focused, and there has been a smaller but steady stream of both situation-based and relationship-focused approaches.

The systematic study of leadership, with publications from the 1930s through the 1950s, started with an atheoretical approach to investigate personal characteristics that could differentiate leaders from non-leaders (House & Aditya, 1997; Stogdill, 1947). Because this approach to leadership implies that leaders are “born and not made,” with effective leaders having traits such as intelligence, physical energy, confidence, etc., they were referred to as “great man” theories, based on the work of Scottish writer Thomas Carlyle (1840). Methodological trouble with the early studies of the trait approach and the conceptual problem that traits are difficult to teach or change (Northouse, 2004), led to researchers
focusing on the behavior, or style, of leaders. The most well-known of these studies were conducted at Ohio State University (Fleishman, 1953) and the University of Michigan (Likert, 1961), both of which identified a dichotomy of leader behaviors: task-oriented and people- or relationship-oriented behaviors. Similar to the trait approach, much of the behavior approach was inductive, plagued with measurement problems, it was conducted with employees from lower-levels of organizations, and results were mixed when trying to connect leadership style with desired outcomes (House & Aditya, 1997; Judge, Piccolo, & Ilies, 2004). Despite these limitations, the concept of the leadership style dichotomy influenced subsequent leadership theories, including contingency theory, path-goal theory and transformational leadership (Evans, 1996; Hersey & Blanchard, 1974; House & Aditya, 1997; Judge, Piccolo, & Ilies, 2004).

As findings from the behavior approach did not identify any leadership style that was universally most effective, researchers decided to investigate how the match between leaders and existing situational and environmental factors would affect leader effectiveness, with the rise of Fiedler’s contingency theory (Fiedler & Macaulay, 1998), Situational Leadership Theory (SLT; Hersey & Blanchard, 1969), path-goal theory (House, 1996), etc. Fiedler’s Contingency theory posits that environments differ on how much control, power, and influence they provide, and that leadership effectiveness is based on the interaction between the leader’s style and the situational context. Hersey and Blanchard (1982) proposed that the situation is the followers’ maturity level for the task at hand, and to be effective, leaders need to adapt their style to the situational demands. Similarly, path-goal theory is based on the
premise that to be effective, a leader’s function is to arrange the linkages between effort, goal attainment, and extrinsic rewards for followers, only to the extent that the environment does not provide those linkages. While all three of these theories have components that are difficult to operationally define (House & Aditya, 1997; Northouse, 2004), there has been substantial support for contingency theory (Peters, Hartke, & Pohlman, 1985; Strube & Garcia, 1981), and the high face validity of SLT has allowed it to thrive in organizations (Graeff, 1997; House & Aditya, 1997; Vecchio, 1987). However, the complexity of path-goal theory has made it difficult to both test and implement in practice (Evans, 1996; Northouse, 2004).

Though path-goal theory emerged as a contingency theory, it did present a focus on the leader-subordinate interaction; leader-member exchange (LMX) theory was the first major theory to present the relationship between the leader and subordinate as the primary focus (Graen & Scandura, 1987). LMX theory is based on research that shows leaders develop differentiated relationships with their subordinates, and the leader-member exchange is differentiated based on the quality of that exchange (Schriesheim, Castro, & Cogliser, 1998). Recent meta-analyses have shown support for LMX for several outcomes across cultures, such as performance, turnover, employee commitment, job satisfaction, empowerment, justice perceptions, etc. (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997; Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016; Rockstuhl, Dulebohn, Ang, & Shore, 2012).
More modern approaches to leadership research emphasize emotions and values (Yukl, 1999) as opposed to the previous ones which assume some rational decision-making (Fiedler & Macaulay, 1998; House, 1996; House & Aditya, 1997; House & Howell, 1992; Schriesheim, Castro, & Cogliser, 1998). The most published leadership theories over the last several decades cover charismatic leadership and transformational leadership (Dinh, et al., 2014; Lowe & Gardner, 2000). Charismatic leadership theory posits that leaders use their charisma to transform the needs, preferences, desires, values, and aspirations of their followers from self-interests to the group’s collective interests (House & Howell, 1992). Meta-analytic studies have shown that charismatic leadership does predict outcomes such as task performance, organizational citizenship behaviors, perceived leader effectiveness, and group performance (Banks, et al., 2017; Fuller, Patterson, Hester, & Stringer, 1996). Transformational leadership theory subsumes aspects of charismatic leadership, and builds upon it to suggest that leaders could influence their followers to exceptional performance through a sense of mission and new ways of thinking and learning to exceptional performance (Judge & Piccolo, 2004; Lord, Day, Zaccaro, Avolio, & Eagly, 2017; Yukl, 1999). Similar to the findings of meta-analyses on charismatic leadership, transformational leadership has also been shown to predict task performance, group performance, organizational citizenship behaviors, satisfaction with leader, and leadership effectiveness (Banks, McCauley, Gardner, & Guler, 2016; Judge & Piccolo, 2004).
Implicit Leadership Theories

Whereas each of the theories discussed above enhances our understanding of leadership, one approach to leadership that has been under-researched focuses actively on the perspective of the followers rather than some objective view of the leader: implicit leadership theories, also referred to as the leader categorization or cognitive categorization approach. In order to simplify the complex stimuli we encounter, one of the most basic mental functions for humans is classifying and categorizing these stimuli (Rosch, 1978; Landy, 2008). Because humans are “cognitive misers,” we naturally classify others into categories (Fiske & Taylor, 1991); in organizations, we classify others as leaders and followers (Engle & Lord, 1997; Lord, Foti, & Phillips, 1982; Lord & Maher, 1993). Research has indicated that individuals’ prior expectations and internal cognitive structures for leadership have impacts on how they perceive leadership behaviors. People use their cognitive prototypes to distinguish leaders from non-leaders (e.g., Epitropaki & Martin, 2004; Lord, Foti, & deVader, 1984; Schyns & Meindl, 2005).

As this approach to leadership began to take shape, the concept of an internal schema of what a leader should be also began to form. Such schemas, called implicit leadership theories (ILTs), refer to cognitive structures used to make attributions about these leaders and determine the characteristics important to effective leadership (Epitropaki & Martin, 2004; Lord et al. 1984). These presuppositions stem from a combination of personal beliefs as well as previous experiences with leaders. ILTs may also be referred to as mental models that affect the way leaders are perceived and received (Javidan, Dorfman, deLuque, & House,
expected leader characteristics and behaviors. Because individuals hold different role expectations and cognitive categories of leadership, ILTs differ among people. An individual’s ILT is structured as a hierarchical model of leadership categories, which specify their ideal leaders. These systems are stored in the observers’ memory and operated automatically when interacting with leaders (Lord et al., 1984).

Like other cognitive schemas, ILTs are developed through early childhood experiences, exposure to images, past experiences with leaders, interpersonal interactions in family and organized groups, and socialization (Epitropaki & Martin, 2004; Hunt, et al., 1990; Keller, 2003; Nye & Forsyth, 1991; Ritter & Lord, 2007). Researchers specified that early childhood experiences have impacts on shaping our images and expectations of ideal leaders, and particularly parents play an important role in the development process (Hunt, et al., 1990; Keller, 2003). More specifically, attachment styles developed in early childhood with parents have an impact on the development of mental models of leadership and explained individual differences. This is especially apparent in the ability to adapt existing ILTs when interacting with people who have different, incongruent ILTs (Keller, 2003). The adaptation mechanism implies dynamic states of individuals’ mental models of leadership. Social contexts and experiences with new leaders continue to shape the category systems of ILTs, though this may be a slow process (Epitropaki & Martin, 2004; Epitropaki & Martin, 2005).
The content of ILTs includes the traits, behaviors, and attitudes that comprise individuals’ schemas, and how these schemas may differ between individuals. Lord et al. (1984) proposed that there are two categories of ILT traits—prototypical traits, which are traits positively associated with leadership; and anti-prototypical traits, which are negatively associated with leadership. Offerman, Kennedy, and Wirtz (1994) expanded upon this dichotomy when developing their measure of ILTs, and most recently, Epitropaki and Martin (2004) further developed and shortened the measure. Epitropaki and Martin (2004) found support for a 6-factor solution to represent ILTs in an organizational setting. The four prototypical factors were Sensitivity, Intelligence, Dedication, and Dynamism; and the two anti-prototypical factors were Tyranny and Masculinity. Epitropaki and Martin (2004; 2005) also found evidence of generalizability of ILTs across different employee groups of age, organizational position, and tenure; as well as support for the stability of ILTs over time. Den Hartog et al. (1999) also found support for the generalizability of aspects of charismatic and transformational leadership across cultures. However, no study results have been able to apply a full set of effective leadership characteristics across a wide range of cultures (Den Hartog et al. 1999; Gerstner & Day, 1994; House, Hanges, Javidan, Dorfman, & Gupta, 2004).

Early studies of ILTs viewed them as a potential source of bias or error in leadership measurement (Eden & Leviatan, 1975; Gioia & Sims, 1985; Rush, Thomas, & Lord, 1977); however, Lord and Maher (1991) proposed there would be a strong rationale for studying the role of ILTs in organizational contexts beyond that of measurement error and several studies
have started examining this concept outside of the laboratory. In the organizational context, Epitropaki and Martin (2005) found that the greater the match between a subordinate’s ILT and the subordinate’s rating of their manager’s profile for prototypic traits, the better the quality of the LMX the employee developed with that manager. In turn, the match in prototypic traits had an indirect effect on organizational commitment, job satisfaction, and well-being, mediated through the dyadic manager–employee interaction. Additionally, results of the longitudinal investigation found the same pattern and ILT–manager profile match, LMX, and employee outcomes one year later, suggesting that the match between subordinates’ ILTs and ratings of their managers affects LMX and not the other way around; i.e., the continued interactions with managers did not influence subordinates to change their original categorization nor the ILT–manager profile match. More recently, Riggs and Porter (2016) investigated the effects of congruence between followers’ ILTs and leaders’ ILTs in MBA students who were also full-time employees, and found that higher congruence for prototypical traits predicted a higher quality LMX. However, Coyle and Foti (2015) found that in undergraduate students, the prototype congruence only had an indirect effect on LMX, mediated by observed cooperation.

ILTIs have also been examined in the context of transformational leadership. When participants were asked to describe their immediate supervisors, Bass and Avolio (1989) found that prototypic traits were more highly correlated with transformational leadership than transactional leadership, indicating that people’s prototypes and ideals are aligned with transformational leadership. Similarly, Den Hartog et al. (1999) also found that charismatic
and transformational leadership attributes were universally endorsed as aspects of outstanding leadership.

**Implicit Followership Theories**

A parallel literature on implicit theories of performance has emerged that also adopts an information-processing approach: implicit followership theories (IFTs; Shondrick & Lord, 2010; Sy, 2010). Similar to ILTs, IFTs are defined as the cognitive structures and schemas about the traits and behaviors that characterize followers (Sy, 2010), and likely form at an early age (Hunt, et al., 1990), developing with increased interaction and exposure with followers (Lord & Maher, 1993). Because the focus on IFTs started with the benefit of insight from ILT research, studies were much quicker to examine IFTs in organizational settings (Sy, 2010; Whiteley, Sy, & Johnson, 2012). Building upon research that addresses the content of ILTs, Sy (2010) has investigated the content of IFTs. He found support for six factors that comprise IFTs: industry, enthusiasm, and being a good citizen are the prototypic factors; and conformity, insubordination, and incompetence are the antiprototypic factors. He also found that the content and endorsement of IFTs was consistent across managerial levels, job functions, and spans of control (Epitropaki et al., 2013).

When examining the relationship between IFTs and LMX, Sy (2010) found that leaders’ followership prototype was positively related to followers’ perspectives on liking the leader, LMX quality with the leader, trust in the leader and job satisfaction; as well as leaders’ perspectives on liking the followers and relationship quality with followers. Similarly, leaders’ followership antiprototype was negatively related to the same outcomes,
except leaders’ liking of followers. Whiteley et al. (2012) found that more positive leader IFTs (based on prototypic traits) predicted higher performance expectations, liking, and LMX quality from leaders, which in turn influenced peer-rated follower performance.

**Measurement of ILTs/IFTs**

There are two approaches that can be taken when examining ILTs/IFTs. Trait approaches to predicting leader emergence and leader effectiveness assume leadership depends on personal qualities of the leader, such as intelligence or charisma (Judge, Bono, Ilies, & Gerhardt, 2002). While most studies of the measurement of ILTs and IFTs have been trait or variable-oriented, the proposed study focuses on a pattern-oriented approach to ILTs and IFTs. In variable-oriented approaches, dispositional characteristics are viewed as distinct aspects of a person that influence various other aspects of that person or outcomes. This type of approach has had empirical support; for example, where general cognitive ability and leader personality made unique contributions to predict leader performance (Connelly, Gilbert, Zaccaro, Threlfall, Marks, & Mumford, 2000; Judge et al.). However, many theorists have argued in favor of a pattern-oriented approach to examine aspects of a person as a whole rather than as discrete parts (Foti & Hauenstein, 2007; Ho & Michael, 2013; Magnusson, 1995; Mumford & Owens, 1984), while others have argued that that the two approaches are complementary to each other (Bergman & Trost, 2006). Variable-oriented approaches are critical for identifying which variables comprise ILTs, but pattern-oriented approaches can be used to identify the patterns of ILT variables to create groups into which people can be classified. Once people are part of a group with a particular pattern, group
membership becomes the focus, rather than the separate variables that define the group, as
will be the case for the proposed study.

Bergman and Trost (2006) sought to begin clarifying the terms “person-oriented” or
“pattern-oriented” approaches as well as their distinction from variable-oriented approaches,
because of confusion in the use of the terms across literature. At the theoretical level,
variable-oriented approaches refer to some variables which are used to predict some future
outcome variables. At the methodological level, the relevant variables and their relations
across time are generally measured using linear statistical models. On the other hand, person-
oriented approaches at the theoretical level regard “the individual as a functioning whole
with processes operating at a system level and its components jointly contributing to what
happens in development” (Bergman & Trost, 2006, p. 604). At the methodological level, a
person-oriented approach focuses on identifying the particular subsystem relevant to the
particular research under study, measuring the components within that subsystem, and then
studying the components as a whole, which is generally realized using some type of pattern-
oriented approach, including, but not limited to cluster analysis. As such, ILTs and IFTs can
be regarded as subsystems of individuals, comprised of various levels of traits or dispositions
that individuals think are definitive of their ideal leader.

The Proposed Study

Most of the published studies on ILTs, all published studies on IFTs, and all
published studies that have looked at both ILTs and IFTs have approached schemas from a
variable-oriented approach. The proposed study will focus on ILTs and IFTs from a pattern-oriented approach by examining the patterns of variables comprising participants’ schemas.

**Research Question 1.** How many ILT profiles compromise a useful taxonomy of individuals?

**Research Question 2.** How many IFT profiles compromise a useful taxonomy of individuals?

**Research Question 3.** What is the nature of each ILT profile in terms of multivariate pattern?

**Research Question 4.** What is the nature of each IFT profile in terms of multivariate pattern?

**Research Question 5.** What is the nature of each ILT profile in terms of frequency of occurrence?

**Research Question 6.** What is the nature of each IFT profile in terms of frequency of occurrence?

In addition to understanding the composition of ILT and IFT profiles, the proposed study will investigate the relationship between profiles and external correlates, including gender and the Big Five personality traits: openness to experience, conscientiousness, extraversion, agreeableness, and emotional stability.

Deal and Stevenson (1998) did not find any differences in content for male and female perceptions of a prototypic leader, they did find differences in the strength of endorsement for some items. For example, men rated traits such as aggressive and
competitive as more prototypical of leaders than women did; and women rated traits such as
being helpful and being aware of others’ feelings higher than men did. Epitropaki and Martin
(2004) similarly found that women’s prototypic leaders tend to be more understanding,
sincere, and honest than men’s; while antiprotypic leaders tend to be more domineering,
pushy, and manipulative than men’s.

**Research Question 7.** What is the relation between rater gender and ILT profile?

**Research Question 8.** What is the relation between rater gender and IFT profile?

Because the Big Five model of personality can be used to describe the most
prominent aspects of personality, this model will be used in the proposed study to understand
the relationship between individuals’ personality and their ILTs/IFTs. Keller (2003) found
that the individuals characterized prototypical leaders as having traits similar to their own.
For example, individuals who characterized themselves as extraverts valued a charismatic
leader, and conscientious individuals valued dedicated leaders.

**Research Question 9.** What is the relation between rater personality and ILT profile?

**Research Question 10.** What is the relation between rater personality and IFT profile?

Though Sy (2010) addressed the relationship between ILTs and IFTs, it was in the
context of convergent and discriminant validity during scale development. By definition, the
scales used to measure ILTs and IFTs would be kept separate. The proposed study plans to
combine factors from existing measures of ILTs and IFTs to determine the overlap in
individuals’ schemas. The same set of items will be asked twice—once to determine participants’ ILTs, and again to determine participants’ IFTs.

**Research Question 11.** What is the relation between individuals’ ILT and IFT profiles?

**Research Question 12.** To what extent are ILTs predictable from IFTs?

**Method**

**Participants and Procedure**

The proposed study will recruit 300 adult participants from Mechanical Turk (MTurk), an online crowdsourcing marketplace through which individuals are paid to complete various tasks. In order to qualify for this study, participants must be employed and based in the United States.

Participants who use MTurk and decide to participate in the current study will first be screened to determine whether they qualify for the study. If they do qualify, they will be asked to complete measures of ILTs and IFTs. The order in which respondents are asked to complete measures of their ILTs and IFTs will be randomly counterbalanced, such that half of the respondents will be asked to indicate their ILTs first, and the other half will be asked to rate their ILTs first. Participants will also be asked to provide demographic information regarding their gender, race, managerial experience, and age. Upon successful completion of the study, participants will be paid for their efforts.
Measures

**ILTs.** Participants’ ILTs will be assessed by combining a shortened version of Offermann, Kennedy, and Wirtz’s (1994) ILT scale (see Appendix A) with an 18-item scale developed by Sy (2010; see Appendix B).

An investigation of the shortened ILT measure adapted by Epitropaki and Martin (2004) resulted in a 21-item measure with four factors comprising the Leadership Prototype (Sensitivity, Intelligence, Dedication, and Dynamism) and two factors comprising the Leadership Antiprototype (Tyranny and Masculinity). Reliability estimates as indicated by coefficient alphas for the factors ranged from 0.70 to 0.88.

A scale development process by Sy (2010) resulted in three factors comprising the Followership Prototype (Industry, Enthusiasm, and Good Citizen) and three factors comprising the Followership Antiprototype (Conformity, Insubordination, and Incompetence). Reliability estimates as indicated by coefficient alphas for the factors ranged from 0.75 to 0.91.

To determine ILT profile membership, participants will be asked to rate how characteristic each of the combined 39 traits are of an ideal business leader. Each trait will be rated on a 9-point scale ranging from 1 (not at all characteristic) to 9 (extremely characteristic).

**IFTs.** Participants’ IFTs will be assessed also be assessed using Epitropaki and Martin’s (2004) 21-item measure and Sy’s (2010) 18-item measure, but the prompt will be different. To determine IFT profile membership, participants will be asked to rate how
characteristic each of the 39 traits are of a follower in a business setting (e.g., an employee in a non-managerial role).

**Big Five personality inventory.** The Big Five dimensions of personality (conscientiousness, extraversion, agreeableness, openness to experience, and emotional stability) will be assessed using the Ten-Item Personality Inventory (TIPI) developed by Gosling, Rentfrow, and Swann (2003). The TIPI includes two items for each of the Big Five personality dimensions (Appendix C). Participants are asked to indicate the extent to which they agree or disagree with each statement using a 7-point Likert-type scale ranging from 1 (disagree strongly) to 7 (agree strongly). Each item consists of two characteristics separated by a comma, and all items have the same stem, “I see myself as:”. Reliability estimates as indicated by test-retest reliability correlations for the five personality factors ranged from 0.62 for the openness to experience factor to 0.77 for the extraversion factor in the development of the TIPI measure.

**Demographic variables.** Participant demographic information will be collected for the following variables: gender, race, managerial experience, and age.

**Supplementary item.** One open-ended item will be asked: What was your thought process when you were answering the items on follower characteristics? While the concept and images of leaders are salient in media and daily interactions, the concept of employees as followers may be difficult to derive. Responses to this item will be used to determine how respondents conceptualized followers in order to rate their characteristics, and may provide insight on how to improve followership research.
Proposed Analyses

Research Questions 1-6

The first six research questions (i.e., understanding the nature of ILTs and IFTs) will be addressed with latent profile analysis (LPA), which supports a person-oriented approach. At the theoretical level, Bergman and Trost (2006) have clarified that person-oriented approaches regard “the individual as a functioning whole with processes operating at a system level and its components jointly contributing to what happens in development” (p. 604). At the methodological level, the person-oriented approach focuses on identifying the particular subsystem relevant to the particular research under study, measuring the components within that subsystem, and then studying the components as a whole, which can be realized with LPA.

The LPA, which uses maximum likelihood estimation to assign participants demonstrating similar ILT or IFT patterns to a latent category (profile), will be conducted using Mplus. The optimal number of profiles (RQs 1 and 2) will be determined by examining the fit indices for each model. The first model is a one-profile model, and additional profiles are added one at a time until problems with non-convergence emerge (Lubke & Muthén, 2005; Nylund, Asparouhov, & Muthén, 2007). At this stage, several fit indices can be examined to determine the most appropriate number of latent profiles. The two classes of fit indices examined will be information-theoretic methods and likelihood ratio (LR) statistical test methods.
One of the information-theoretic methods is the Bayesian Information Criterion (BIC). The BIC is based on the maximum likelihood estimates of the model parameters for selecting the parsimonious model, where a lower BIC value indicates a better fitting model (Collins, Fidler, Wugalter, & Long, 1993; Magidson & Vermunt, 2004; Nylund, et al, 2007; Tien, Coxe, & Cham, 2013). The Akaike’s Information Criterion (AIC) is similar to the BIC and though it is commonly used, it is not shown to be a reliable method for selecting the number of classes (Tien, et al., 2013).

An LR statistical test method is the bootstrap likelihood ratio test (BLRT), recommended by McLachlan and Peel (2000). The BLRT uses a bootstrap resampling method to approximate a p-value that indicates whether the increase in model fit between the $k-1$ and $k$ class model provides a significantly better fit to the observed data. The preferred model is determined when a model with $k$ classes no longer has a significant BLRT. Another recommended LR method is the Lo-Mendell-Rubin LR (LMR) test (Lo, Mendell, & Rubin, 2001; Tien, Coxe, & Cham, 2013). The LMR uses the adjusted asymptotic distribution of the LR statistics to compare model fit between the $k-1$ and $k$ class model. Similar to the BLRT, the preferred model is determined when a model with $k$ classes no longer has a significant BLRT, and the $k-1$ model is preferred.

In addition to choosing a model with the lowest BIC value, a significant BLRT, and a significant LMR, the optimal solution should also have no profiles with a small number of cases, and should contain clearly distinguishable profiles, as indicated by a high probability.
that individuals belong to their assigned profile and a low probability that individuals belong to another profile (Meyer, Stanley, & Parfyonova, 2012).

Once the most appropriate number of latent profiles are determined, the multivariate pattern of each profile will be described and graphed in terms of mean endorsements of the ILT and IFT components (RQs 3 and 4). The number and proportion of participants representing each profile will be provided (RQs 5 and 6).

Research Questions 7 and 8

The seventh and eighth research questions, regarding the relation between each ILT (RQ 7) and IFT (RQ 8) profile and gender will be addressed with chi-square contingency tables to determine how each of the profiles relate with gender. A chi-square ($\chi^2$) test and a non-trivial effect size measured by Cramér’s phi ($\phi_c$) between gender and ILT or IFT profiles will be examined. The value of Cramér’s phi provides the magnitude of the relationship between two nominal variables, and is not affected by the number of categories representing each variable, like other strength of effect estimates are (Field, 2005; Wuensch, 2015). The Cramér’s phi, sometimes referred to as the Cramér’s V, is equivalent to the Phi coefficient in a 2 x 2 table, which is equivalent to the Pearson $r$ correlation coefficient between two dichotomous variables. Similar to the Pearson $r$ correlation coefficient, the Cramér’s phi ranges from zero to one, where zero indicates there is no association between the variables examined, and a one indicates that the two variables are perfectly related to each other.

A significant $\chi^2$ value and a non-trivial Cramér’s phi value would indicate men are more likely to have certain profiles, while women are more likely to have other profiles.
Pairwise comparisons will be made to identify which profiles differ in their relationship with gender, and odds ratios for these pairs will be calculated. For example, if ILT Profile 1 and ILT Profile 2 are compared, an odds ratios can indicate how much more likely men are than women to have ILT Profile 1 rather than ILT Profile 2. The composition of the profiles will be discussed in relation to gender.

**Research Questions 9 and 10**

The ninth and tenth research questions, regarding the relation between each ILT (RQ 9) and IFT (RQ 10) profile and personality will be addressed with analysis of variance (ANOVA) to determine how each of the profiles relate with the five personality variables.

A significant \( p \)-value for the \( F \)-test and non-trivial effect size measured by eta-squared (\( \eta^2 \)) would indicate some ILT or IFT profiles have a meaningful relationship with that particular aspect of personality. For example, individuals who identify as more conscientious may be more likely to expect followers to be a combination of industrious, good citizens, and more open to conformity than individuals who identify as less conscientious. If a significant \( p \)-value and non-trivial effect size is found, post hoc pairwise comparisons will be used to determine which profiles differ in their relationship with each of the personality variables. The composition of the profiles will be discussed in relation to personality.

**Research Questions 11 and 12**

The last two research questions will be addressed using a chi-square contingency table to determine the relationship between individuals’ ILTs and IFTs. A significant \( p \)-value
for the chi-square ($\chi^2$) test and a non-trivial effect size measured by Cramér’s phi ($\phi_c$) will indicate that some ILT profiles are related to some IFTs (RQ 9), and that some individuals’ ILTs could be predicted from their IFTs (RQ 10). If the results of the chi-square analysis are significant and non-trivial, pairwise comparisons will be made to identify which ILT profiles are meaningfully related to IFT profiles, and odds ratios for these pairs will be calculated. For example, if ILT Profile 1 and ILT Profile 2 are compared in the context of IFT Profile 5 and IFT Profile 6, an odds ratio can indicate how much more likely individuals with IFT Profile 5 (compared to individuals with IFT Profile 6) also have ILT Profile 1 rather than ILT Profile 2. The composition of related profiles will be described and implications discussed.
REFERENCES


APPENDICES
Appendix A

Existing Measure of Implicit Leadership Theories

We are going to be asking you about leaders and followers in business settings. For the purpose of this study, a leader refers to an employee in a managerial position who has at least one direct report. A follower refers to an employee who reports to a manager. For some items, you may find that the characteristics are similar for both leaders and followers; while for other items you may find that leaders embody a particular characteristic more than followers, and vice versa.

To measure ILTs: How characteristic is each of the listed traits of a business leader? Use the following scale:
To measure IFTs: How characteristic is each of the listed traits of a follower in a business setting (e.g., an employee in a non-managerial role)? Use the following scale:

<table>
<thead>
<tr>
<th>Not at all characteristic</th>
<th>Extremely characteristic</th>
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**LEADER PROTOTYPE**

- **Sensitivity**
  - Helpful
  - Understanding
  - Sincere

- **Intelligence**
  - Intelligent
  - Educated
  - Clever
  - Knowledgeable

- **Dedication**
  - Dedicated
  - Motivated
  - Hard-working

- **Dynamism**
  - Energetic
  - Strong
  - Dynamic

**LEADER ANTIPROTOTYPE**

- **Tyranny**
  - Domineering
  - Pushy
  - Manipulative
  - Loud
  - Conceited
  - Selfish

- **Masculinity**
  - Male
  - Masculine
Appendix B

Existing Measure of Implicit Followership Theories

We are going to be asking you about leaders and followers in business settings. For the purpose of this study, a leader refers to an employee in a managerial position who has at least one direct report. A follower refers to an employee who reports to a manager. For some items, you may find that the characteristics are similar for both leaders and followers; while for other items you may find that leaders embody a particular characteristic more than followers, and vice versa.

To measure ILTs: How characteristic is each of the listed traits of a business leader? Use the following scale:

To measure IFTs: How characteristic is each of the listed traits of a follower in a business setting (e.g., an employee in a non-managerial role)? Use the following scale:

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FOLLOWERSHIP PROTOTYPE

Industry
- Hardworking
- Productive
- Goes above and beyond

Enthusiasm
- Excited
- Outgoing
- Happy

Good Citizen
- Loyal
- Reliable
- Team player

FOLLOWERSHIP ANTIPROTOTYPE

Conformity
- Easily influenced
- Follows trends
- Soft-spoken

Insubordination
- Arrogant
- Rude
- Bad-tempered

Incompetence
- Uneducated
- Slow
- Inexperienced
Appendix C

Ten-Item Personality Inventory

Here are a number of personality traits that may or may not apply to you. Please use the rating scale below to indicate the extent to which you agree or disagree with each statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

<table>
<thead>
<tr>
<th>Disagree strongly</th>
<th>Disagree moderately</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree moderately</th>
<th>Agree strongly</th>
</tr>
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<tr>
<td>1</td>
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<td>4</td>
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<td>6</td>
<td>7</td>
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I see myself as:

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<th>The content in this column will not be visible to the participant.</th>
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<tr>
<td>11. Extraverted, enthusiastic.</td>
<td>Extraversion</td>
</tr>
<tr>
<td>13. Dependable, self-disciplined.</td>
<td>Conscientiousness</td>
</tr>
<tr>
<td>15. Open to new experiences, complex.</td>
<td>Open to Experiences</td>
</tr>
<tr>
<td>16. Reserved, quiet.</td>
<td>Extraversion – reverse scored</td>
</tr>
<tr>
<td>17. Sympathetic, warm.</td>
<td>Agreeableness</td>
</tr>
<tr>
<td>18. Disorganized, careless.</td>
<td>Conscientiousness – reverses scored</td>
</tr>
<tr>
<td>20. Conventional, uncreative.</td>
<td>Open to Experiences – reverse score</td>
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