

**TRUSTING AND FEELING TRUSTED: TWO DISTINCT ASPECTS
OF LEADER-FOLLOWER TRUST RELATIONSHIPS**

XIANGYU GAO

(M.S., Xi'an Jiaotong University)

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DECLARATION

I hereby declare that this thesis is my original work and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in the thesis.

This thesis has also not been submitted for any degree in any university previously.



Xiangyu Gao

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TABLE OF CONTENTS

Introduction.....	1
Research questions.....	4
Theoretical development.....	5
Scale development.....	30
Theory testing.....	43
Conclusion.....	56
Reference.....	57

SUMMARY

Dynamic interpersonal trust relationships, by their very nature, involve both giving and receiving trust. However, the primary focus has been on giving trust than to receiving trust, and research on the dynamics of receiving trust is at a much earlier stage of development. We still do not know much about how people respond to other's trust and why. In this dissertation, I investigate the dynamics of trusting and feeling trusted in leader-follower relationship. In essay 1, I propose a dual spiral model to explain the dynamics of leader-follower trust relationships. This model addresses key antecedents, consequences, and interaction of trust and felt trust. In essay 2, using multiple samples, I develop and validate new measures of felt trust and trust in the Chinese cultural context. The developed measures demonstrate high reliability, discriminant and convergent validity, nomological validity, and predictive validity. In essay 3, I empirically test one part of dual spiral model of trust and felt trust—a follower's felt trust increases his or her trustworthy behaviors through three key psychological states. Findings from this study reveal that a follower's felt trust is positively associated with and explains unique variance in his or her trustworthy behaviors, including taking charge, helping, prohibitive voice, and promotive voice above and beyond follower's trust. Moreover, the effects of follower's felt trust on taking charge and promotive voice are mediated by follower's organization-based self-esteem, autonomous work motivation, and felt responsibility. Taken together, my dissertation research contributes to trust scholarship by providing the conceptual foundations for decoupling trust from felt trust, and incorporating the effects of felt trust that augment the effects of trust in leader-follower relationship. My research also offers new psychometrically sound instruments to assess felt trust and trust in Chinese cultural context, and documents and explains the unique effects of felt trust on trustworthy behaviors.

Keyword: Trust, felt trust, trusting behavior, trustworthy behavior

LIST OF TABLES

Table 1.....	66
Table 2.....	67
Table 3.....	68
Table 4.....	69
Table 5.....	70
Table 6.....	71
Table 7.....	73
Table 8.....	74
Table 9.....	76

LIST OF FIGURES

Figure 1.....	78
Figure 2.....	79
Figure 3.....	80

INTRODUCTION

The literature on leader-follower trust relationships has grown significantly over the last two decades (Mishra & Mishra, 2013). We have learned much about the positive consequences of follower's trust in leaders, which include increased organizational commitment, job satisfaction, information sharing, organizational citizenship behavior, job performance, and reduced turnover intention (see Dirks & Ferrin, 2002 for a review). Scholars have stated repeatedly that leaders communicate their trust in employees through their words, decisions, and actions, and that employee beliefs about whether or not they are trusted affect their work-related attitudes and behaviors (Eden, 1984; Fox, 1974; Livingston, 1969; McGregor, 1960). However, research on these dynamics is at a much earlier stage of development (Brower, Lester, Korsgaard, & Dineen, 2009). We still do not know much about how followers respond to leaders' trust and why. Because trust relationships by nature involve both giving and receiving trust (Sztompka, 1999), both psychological processes—trusting and feeling trusted—merit systematic theoretical attention.

Motivation for this research comes, first and foremost, from a desire to better understand the interpersonal dynamics of trust. Past trust scholarship has affirmed the importance of reciprocity—mutually beneficial 'trusting' relationships only exist when both parties within the relationship trust one another. Assertions to this effect abound in the literature (De Jong & Dirks, 2012; Ferrin, Bligh, & Kohles, 2008; Graen & Uhl-Bien, 1995; Kong, Dirks, & Ferrin, 2014; Mishra & Mishra, 1994; Serva, Fuller, Mayer, 2005; Tomlinson, Dineen, & Lewicki, 2009; Zand, 1972). However, empirical findings generally show that reciprocity of trust beliefs is the exception rather than the rule. Indeed, the correlation of trust beliefs within leader-follower dyads is generally below .25 (see Brower et al., 2009; Seppälä, Lipponen, Pirttilä-Backman, & Lipsanen, 2011 for two examples). One logical explanation for low reciprocity is that the targets of trust may not fully grasp the

extent to which they are or are not trusted. Another explanation is that trust, by its very nature, is not necessarily reciprocal, because trust beliefs are founded upon evidence of trustworthiness rather than trust. Trusting parties need not be trustworthy—indeed, parties often ‘trust’ others because they themselves lack necessary skills and competencies for focal tasks. By developing and testing a model that addresses key antecedents and consequences of trust and felt trust, we can better understand their dynamic interplay within ongoing working relationships.

Second, knowing that one is trusted by others may serve important psychological functions that are not served by trusting beliefs. For instance, a person’s awareness of his or her being trusted by others may validate beliefs about being competent, being able to function autonomously, and being connected with others (Ryan & Deci, 2000). Such knowledge should enhance an individual’s intrinsic motivation and in turn lead to high performance and psychological well-being (Gagne & Deci, 2005). Furthermore, believing that one is trusted by others may function as a reflected appraisal (Cooley, 1902; Mead, 1934) that shapes self-concept, and through this means has effects on affect, cognition, motivation, and behavior (Markus & Wurf, 1987). For example, feeling trusted is identified as a central component of one’s self-esteem at work (Pierce, Gardner, Cummings, & Dunham, 1989). Findings from previous research suggest that organization-based self-esteem (OBSE) has positive relationships with intrinsic work motivation, job satisfaction, organizational commitment, identification, organizational citizenship behavior, and job performance (Pierce & Gardner, 2004). Although the proposition remains to be tested empirically, it is possible that this aspect of ‘feeling trusted’ may be more determining of trust relationship outcomes than the trusting beliefs we have studied for many years. At a minimum, directing attention to the antecedents and consequences of felt trust may explain substantial incremental variance in overall trust relationship outcomes.

Third and finally, studying the construct of felt trust could help scholars solve some puzzles in the research of mutual trust. Although many studies have mentioned that mutual trust between leaders and followers is essential for effective leadership (e.g., Graen & Uhl-Bien, 1995), there is still an implicit debate on what aspects of trust matter most. Some scholars maintain that mutual trust relationships exist when each party trusts the other (i.e. symmetry of high trust). However, would it be reasonable to say that a relationship of mutual trust exists when each party trusts the other but does not believe that he or she is trusted by the other? Other scholars argue that mutual trust occurs when two parties trust one another at a complementary level, and this level of trust is jointly known by both parties (Deutsch, 1958). However, what is implied in “this level of trust is jointly perceived by both parties”? These puzzles imply the importance of research on the role of felt trust in the leader-follower trust dynamics.

RESEARCH QUESTIONS

How does felt trust differ from trust? How does the psychological mechanisms governing felt trust differ from those concerning trust? How does the interplay of felt trust and trust affect and shape the dynamics of a trust relationship? In this dissertation, I strive to answer these questions in the context of leader-follower trust relations. My dissertation consists of three components: a theoretical framework, a scale development study, and an empirical test of key relationships within the theoretical framework. In essay 1, I will clarify the differences between trusting and feeling trusted, and then propose a theoretical framework to explain how these two distinct aspects affect one another and propel the evolution of leader-follower trust relationship. I will also explain how this framework helps scholars solve some puzzles in the trust literature and how it enhances our understanding of trust dynamics between leader and follower. In essay 2, following the established scale development procedure, I will develop and validate two scales measuring the constructs of follower's felt trust by leader and trust in leader in the Chinese cultural context. In essay 3, I will test several key linkages within the theoretical framework. Specifically, I will examine how a follower's felt trust by leader influences his or her trustworthy behaviors at workplace, and how the follower's trust in leader moderates the functions of felt trust.

THEORETICAL DEVELOPMENT (ESSAY 1)

Theoretical Background

To address the dynamic process through which trust between two parties grows or diminishes, Serva, Fuller, and Mayer (2005) proposed a model of reciprocal trust. According to this model, each party continuously updates its appraisal of the other party's trustworthiness by observing the other party's behaviors such as delegation, reduced monitoring, and formalization. Based on the updated perceived trustworthiness, each party forms a new version of trust in the other party, and aligns its behaviors toward the other party with the updated trust. Through these continuous interactions, trust between two the parties may sequentially develop in a reciprocal way. The results of a 6-week controlled field study of 24 teams supported this reciprocal trust model.

Building on this important findings, Ferrin, Bligh, and Kohles (2008) proposed a spiral model of the relationship between perceived trustworthiness and cooperation over time. According to this reinforcement spiral model, an actor's trust in a partner causes the actor to cooperate with the partner; the partner then observes the actor's cooperation, and this has a positive effect on his or her trust in the actor. Simultaneously, a partner's trust in an actor causes the partner to behave cooperatively toward the actor, which in turn strengthens the actor's trust in the partner. As interaction progresses, higher trust provides a basis for increased cooperation. If the two parties continue to interact, the spiraling should logically continue.

Both of these models—the reciprocal trust model (Serva et al., 2005) and the perceived trustworthiness-cooperation spiral model (Ferrin et al., 2008)—help us to better understand the dynamic process of trust relationship development. However, both models assume that each party updates its trust based on observations of the other party's behaviors that follow from trust. In other word, one party's trusting behavior serves as the basis for another party's

trust. This assumption is problematic. According to Mayer, Davis, and Schoorman's (1995) conceptualization of trust, one party's trust be founded on the other party's trustworthy rather than trusting behaviors.

Moreover, these two models focus only on giving trust, leaving unaddressed the processes associated with receiving trust. This seems to suggest that each party's felt trust is not important or at least ignorable in explaining the dynamic process of trust relationship. However, when interacting with others, people care not only about how much they can trust in others but also about how much they are trusted by others (Lau, Liu, & Fu, 2007). Scholars have argued that employee beliefs about whether or not they are trusted have effects on their attitudes and behaviors (Eden, 1984; Fox, 1974; Livingston, 1969; McGregor, 1960). For instance, employees who believe that they are trusted by their leader have higher levels of OCB and work performance than their peers who do not believe that they are trusted (e.g., Lau, Lam, & Wen, 2014; Lester & Brower, 2003; Salamon & Robinson, 2008).

To better understand interpersonal trust dynamics, researchers need a more nuanced framework that separates out trusting and feeling trusted as distinct. In the following part, I first define the key constructs, including felt trust, trust, trusting behavior, and trustworthy behavior, distinguish them from one another, and then propose my theoretical framework.

Defining and Distinguishing Key Constructs

In line with previous trust research (De Jong & Elfring, 2010; Lewicki, McAllister, & Bies, 1998; McAllister, 1995; Rousseau, Sitkin, Burt, & Camerer, 1998), I define *trust* as an individual's psychological state involving positive expectations about the words, actions, and decisions of another. Positive expectations refer to the belief that the intentions and behaviors of another will be beneficial to the fulfilment of one's needs or pursuit of one's interests, despite the possibility of being disappointed (Gambetta, 1988; Lewicki et al., 1998; Rousseau et al., 1998). In the mental process of trust, individuals reach these positive expectations on

the basis of inductive knowledge of another's trustworthiness ("good reasons") and suspension of irreducible uncertainty of the other's future actions (Möllering, 2001). This suspension brackets out uncertainty and ignorance, thus making inductive knowledge of another's trustworthiness momentarily "certain" and enabling leaps of faith beyond what "good reason" alone would warrant (Möllering, 2001).

In addition, I define *felt trust* as the perception or belief that one is treated by another in a trusting manner. *Feeling trusted* and *believing that one is trusted* go together, but neither cannot be equated with *being trusted*. Whereas being trusted refers to the real situation in which a focal person is really trusted by a target person (Dirks & Skarlicki, 2009), felt trust refers to the focal person's subjective perception that he or she is trusted by one or more other parties (Lau et al., 2014). Understandably, a focal person can believe that he or she is trusted by another when this is not the case and vice versa.

An interpersonal trust relationship, by its very nature, involves giving trust (i.e. trusting) and receiving trust (i.e., feeling trusted) (Sztompka, 1999), and they are distinct psychological states: trust represents one's confident and positive expectations on trustees; and trustees may not realize the unspoken expectations, or misinterpret the intentions underlying the trusting behaviors. In contrast, felt trust marks one's perception of others' positive expectations, and others may not really trust the perceiver. A key difference between these two constructs is the subject—the subject of trust is the trustor, and the subject of felt trust is the trustee (Lau et al., 2014).

In the dynamics of trust relationships, people care about not only how much they can trust others but also how much they are trusted by others (Lau et al., 2007). We can separate out these two trust forms as 'sent trust' (trust in a specific other) and 'received trust' (trust received from a specific other). Appraisals of sent and received trust can be somewhat correlated, especially when a person believes that the trust relationship is constructed on an

emotional base. This is because people in trust relationships with affective bonds tend to assume mutuality of emotional investments (Lewis & Weigert, 1985), in which case trusting someone who does not also trust the trustor is problematic and a source of dissonance. According to cognitive dissonance theory (Festinger, 1957), the discomfort associated with conflicting beliefs would motivate people to bring these beliefs into alignment. However, I argue that asymmetry between the extent to which one trusts and feels trusted is not uncommon for two reasons. First, trust and felt trust have very different antecedents. A major antecedent of one's trust is the counterpart's trustworthiness as reflected in his or her ability, benevolence, and integrity (Mayer et al., 1995). By way of contrast, felt trust likely depends on an individual's confidence in his or her own ability, integrity, and benevolence towards the trustor, and his or her belief about the extent to which the trustor is aware of and values these qualities (Brower, Schoorman, & Tan, 2000). Understandably, differences in the trustworthiness of the two parties provide one reason why trust and felt trust might diverge. Second, self-enhancement tendencies and imbalances of power help to maintain asymmetry (Graebner, 2009). For example, firm leaders may distrust business associates but still maintain that they are trusted, simply because they believe they have more business savvy than those associates (Graebner, 2009). Such self-enhancement may crowd out motives to reconcile the conflicting beliefs. By the same token, leaders who feel distrusted by their partners may still trust powerful partners in order to deal with anxiety and fear of exploitation caused by feelings of powerlessness (Graebner, 2009; Weber, Malhotra, and Murnighan, 2005). These arguments prompt me to propose:

Proposition 1: Trust and felt trust are distinct constructs. One's trust and felt trust are empirically interrelated, but they may not be symmetric.

Along with the distinction between trust and felt trust, it is important to distinguish trusting behavior from trustworthy behavior. I define *trusting behavior* as conduct (words,

decisions, and actions) that follows from one's trust in others. When people trust others, they behave in ways that are consistent with the assurance that trust provides. For instance, they may be more inclined to rely on those they trust (reliance) and share sensitive information with them (disclosure) (Gillespie, 2003), and these behaviors may entail a degree of personal risk taking (Mayer et al., 1995). In the context of leader-follower trust relationships, leader trusting behaviors may include—but are not limited to—delegating and empowering, not micromanaging, being open to follower' input, encouraging experiments, providing support, and sharing sensitive information with followers. Follower trusting behaviors may include—but are not limited to—accepting the leader's influence and guidance, reducing control-based monitoring and defensive behavior, and sharing sensitive information with the leader. These behaviors are reflective of the confident positive expectations inherent in trust, and they enhance the likelihood that a trusting party will be perceived by those directly affected by this behavior as such.

I define *trustworthy behavior* as patterned conduct (words, decisions, and actions) that forms the foundation for others' trust. Generally speaking, behaviors that demonstrate an admixture of competence, benevolence, and integrity reflect trustworthiness (Mayer et al., 1995). For example, keeping a promise, being just, and caring for others can be regarded as trustworthy behaviors, because they reflect integrity and benevolence. In the context of leader-follower trust relationships, a leader's trustworthy behavior might include being just and ethical, demonstrating concern and care, and offering accurate and timely feedback. Follower trustworthy behaviors include taking initiative at work, offering improvement-oriented voices, being conscientious at work, and helping one's leader and co-workers.

Although trusting and trustworthy behaviors are conceptually different—trusting behaviors express one's trust in others, and trustworthy behaviors provide the foundation for others to trust—there are some behaviors that can reflect both trusting and trustworthy

characteristics. For instance, providing scarce resources to followers may demonstrate either a leader's trust in his or her followers (e.g., without trust, leader would not take the risk to invest scarce resources in followers) or a leader's trustworthiness (e.g., being able to acquire scarce resources reflects the leader's competence). However, this need not mean that the conceptual difference between trusting behavior and trustworthy behavior is vague. It only means that some behaviors that may serve more than one function. Notwithstanding this aspect of overlap, we maintain that the behaviors anchoring trust and those that follow from it are conceptually distinct¹. Thus, I propose:

Proposition 2: Trusting behavior and trustworthy behavior are distinct constructs.

Dual Spiral Model

Conceptual frameworks proposed to model the dynamics of interpersonal trust emergence and change over time are often represented as a single spiral of initiation and response within relationships (see Ferrin et al., 2008; Serva et al., 2005; Zand, 1972). Within these models, Person A's trust in Person B leads to his or her risk taking behaviors in interactions with Person B. In turn, Person B makes inferences about Person A's trustworthiness from Person A's behaviors, updates his or her trust assessment accordingly, and behaves in a manner that is consistent with those trust beliefs (e.g., Person B engages in risk taking behaviors in interactions with Person A). Person A observes person B's behavior and adjusts his or her evaluation of Person B's trustworthiness, and behaves in a manner that is consistent with that new trust assessment. Models such as these certainly allow for a more nuanced treatment of interpersonal trust dynamics than traditional static models. However, they also confound the dynamics of trusting with those associated with feeling trusted, which

¹ In my theoretical framework, I propose that trust predicts trusting rather than trustworthy behaviors, and that felt trust predicts trustworthy rather than trusting behaviors. However, I do not deny that trust and felt trust may predict the same behavior, when the behavior contains both trusting and trustworthy characteristics.

are very different. Moreover, trusting and feeling trusted represent two salient aspects of a trust relationship (Sztompka, 1999). Neither trust nor felt trust alone can fully capture the essence of interpersonal trust dynamics. More importantly, trust and felt trust have distinct antecedents, consequences, and functioning mechanisms, which allows interdependent parties in trust relationship to separately form and adjust their beliefs about the extent to which they trust others and feel trusted by them.

To better understand interpersonal trust dynamics, researchers need a more nuanced framework that separates out the dynamics of trusting and feeling trusted as distinct. To this end, I propose a dual spiral model (see Figure 1) in which the causes and consequences of trust in others (sent trust) are distinguished from those associated with felt trust by others (received trust). Within this framework, one party's felt trust results primarily from a counterpart individual's trusting behaviors. This does not mean that the counterpart's trusting behaviors are the only antecedents of felt trust. Understandably, people may rely on information acquired from third parties or wishful thinking to form their beliefs about the extent to which they are trusted by others. However, because trust is an individual's psychological state (Rousseau et al., 1998) which cannot be directly observed from outside one's mind, a person can only infer a counterpart's trust from observing and interpreting that person's behavior. Thus, the behaviors that follow from a counterpart's trust can be expected to be the primary basis on which a focal individual comes to feel trusted.

Insert Figure 1 about here

Trusting Behavior and Felt Trust. In the context of leader-follower trust relations, followers infer the extent to which they are trusted by their leaders from the trusting behavior of the leader that they observe. The more trusting behavior that followers notice, the more

likely it is that followers will feel trusted by their leaders. For example, by delegating important tasks to followers, leaders express trust in their followers. This is because, to some extent, delegating important tasks is risky and shows a leader's positive expectation concerning and willingness to rely on a follower's capability to get tasks done successfully (Ahearne, Mathieu, & Rapp, 2005). Therefore, as important tasks are increasingly delegated to followers by their leaders, followers are more inclined to believe that their leaders trust them, and feel trusted by them as a consequence. Similarly, leaders also make inferences about the extent to which they are trusted by their followers from the trusting behavior they observe. The more trusting behavior that leaders observe, the more likely they are to believe that they are trusted by followers. For example, by sharing sensitive information (e.g., disclosure of personal feelings about work related issues), followers signal their trust to leaders (Gillespie, 2003; Zand, 1972). This self-disclosure should enhance the belief of leaders that they are trusted by followers. Accordingly, I propose:

Proposition 3a: Leader's trusting behavior is positively associated with follower's felt trust.

Proposition 3b: Follower's trusting behavior is positively associated with leader's felt trust.

Trustworthy Behavior and Trust Beliefs. Past research on trustworthy behavior as a foundation for trust—conduct reflecting degrees of ability, benevolence and integrity—is well established in organization science (Colquitt, Scott, & LePine, 2007; Mayer et al., 1995). Consistent with this literature, I theorize that people's trust appraisals concerning others are founded primarily on an appreciation of the trustworthy behavior they observe. The greater the evidence of a counterpart's trustworthy behavior, the more likely an observer is to trust that individual.

Within leader-follower relations, if leaders consistently behave in ways that are fair and ethical, then followers may have confidence in the integrity of leaders and by implication trust them (Brown & Treviño, 2006; Colquitt & Rodell, 2011). Similarly, if followers take initiative to improve the quality of their work, offer improvement-oriented suggestions, and refrain from deviant behavior, then leaders may be more likely to believe that followers are competent and ethical and really care about the interests of organization, and in turn increase trust in followers. Accordingly, I propose:

Proposition 4a: Leader's trustworthy behavior is positively associated with follower's trust in the leader.

Proposition 4b: Follower's trustworthy behavior is positively associated with leader's trust in the follower.

The distinction between trusting and feeling trusted becomes more apparent as we consider the psychological mechanisms by which these two psychological states influence behavior. On the one hand, people's trust beliefs are associated with their trusting behavior through dynamics of risk regulation. More specifically, trusting beliefs serve to reduce the perceived risk of trusting behavior and increase the threshold of risk considered acceptable. On the other hand, people's felt trust beliefs are associated with trustworthy behavior through their effects on self-concepts, autonomous work motivation, and felt responsibility.

Trust and Risk Regulation. In the mental process of trust, suspension of irreducible uncertainty enables trustors to increase their apparent vulnerability to others (trustees) to a degree that goes beyond what inductive knowledge of trustee alone might warrant (Möllerling, 2001). In part, the positive expectations of trust may serve to reduce the perceived risk associated with interdependent action, reliance and disclosure. Actions considered unwise in the presence of an untested and un-trusted counterpart may be viewed as highly appropriate for a trusted colleague that can be counted on to provide support and

care (McAllister, 1995). Furthermore, trust beliefs may provide the foundation for appetitive or promotion-oriented behavior that entails a greater degree of personal risk taking within the relationship (Mayer et al., 1995).

Although trust can provide a basis for risk taking in relationships, the form of this risk taking may depend on the situation (Mayer et al., 1995). One's inner state of trust is manifested in behaviors associated with 1) acceptance of influence from others and dependence on them, 2) reduced controlling and monitoring of others, and 3) disclosure of accurate, relevant and complete information, as well as sharing of personal thoughts and feelings (Zand, 1972). Building upon this understanding, Gillespie (2003) has identified two highly domains of trusting behavior: reliance (e.g., relying on another's skills, information, knowledge, judgments, or actions) and disclosure (e.g., sharing work-related or personal information of a sensitive nature).

In the context of leader-follower trust dynamic, leader's trust in follower increases leaders' willingness to take risks in relation with follower, and then promotes leaders' trusting behaviors, such as delegating to and empowering followers (Hakimi, Knippenberg, & Giessner, 2010; Yukl, 1994) and being open to suggestions and feedback from followers (Spreitzer & Mishra, 1999). Similarly, a follower's trust in his or her leader enhances that follower's willingness to take risks in relation with the leader, and in turn results in various forms of trusting behavior—accepting the goals, decisions, and explanations communicated by the leader (Oldham 1975; Rousseau & Tijoriwala, 1999; Tyler & Degoey 1996), reducing control-based monitoring and defensive behaviors (McAllister, 1995), and honestly reporting personal mistakes to leader (Leroy et al., 2012). Thus, I propose:

Proposition 5a: The positive relationship of leader's trust in a follower with leader's trusting behavior is mediated by the leader's willingness to take risk in the trust relation with follower.

Proposition 5b: The positive relationship of follower's trust in a leader with follower's trusting behavior is mediated by the follower's willingness to take risk in the trust relation with the leader.

Felt Trust, Identity, and Motivation. Whereas the implications of trust beliefs for behavior follow primarily from their implications for the risks and returns associated with behavior, the implications of felt trust follow from their implications for feelings of self-worth and social identity. Here we consider the mediating roles of self-concept, autonomous work motivation, and felt responsibility.

Self-concepts. First, I argue that one's felt trust exerts a positive impact on one's own work-related self-efficacy and organization-based self-esteem, which in turn motivates the person to behave in a trustworthy manner. Psychologists and sociologists have acknowledged the importance of reflected appraisals in the development of self-concept (James, 1890; Cooley, 1902; Mead, 1934). As argued, the "self" is a product and reflection of social life (James, 1890), we develop and change our self-concepts by seeing how others view us, and we incorporate those views into the "self" (Cooley, 1902; Mead, 1934). Work is a core part of our social life in that we spend most of daytime in the workplace with our leaders, coworkers, followers, and customers. Not surprisingly, our beliefs about how these people view us influence our work-related self-concepts. Because others' trust in us at work reflects their positive views of our competence, benevolence, and integrity (Mayer et al., 1995), beliefs about how others trust us at work may affect our work-related self-concept. In this study, I focus on work-related self-efficacy and organization-based self-esteem.

Specifically, the extent to which a follower feels trusted by his or her leader may enhance that follower's work-related self-efficacy. Leaders are generally regarded as an important source of evaluative information about followers' capability. Leaders' trust conveys their recognition of followers' capabilities (Karakowsky, DeGama, & McBey,

2012). Thus, beliefs about being trusted by one's leader may reassure a follower about his or her ability to complete tasks and reach goals, and thus promote his or her work-related self-efficacy (Eden, 1992; Gist & Mitchell, 1992). It has been found that work-related self-efficacy affects people's cognition, motivation, and behaviors at workplace (Gist, 1987). For instance, followers with high work-related self-efficacy tend to set higher goals, plan well, put more efforts to complete tasks, persist longer in those efforts, cope stress well, and achieve higher performance (Bandura, 1986; Stajkovic & Luthans, 1998). Understandably, these behavioral patterns are usually regarded as trustworthy in organizational settings (Bauer & Green, 1996). Therefore, I argue that felt trust of a leader is positively associated with a follower's trustworthy behavior through promoting its effects on work-related self-efficacy.

Furthermore, feeling trusted by one's leader may enhance a follower's organization-based self-esteem. Self-esteem is an individual's overall affective evaluation of his or her own competence and worthiness as a person (Mruk, 2006). Both self-efficacy and self-esteem have been conceptualized as general self-evaluations (e.g., Judge, Locke, & Durham, 1997). However, self-efficacy differs from self-esteem in that self-efficacy captures more of a motivational belief regarding one's task capabilities, whereas self-esteem captures an affective evaluation of one's self (Chen, Gully, & Eden, 2004). Self-esteem is usually conceptualized as a hierarchical, multifaceted, and situation-specific construct (Simpson & Boyle, 1975). Building on this understanding, Pierce and colleagues (1989) introduced the concept of organization-based self-esteem (OBSE), defined as the degree to which an individual believes him/herself to be capable, significant, and worthy as an organizational member. In line with Korman (1970), Pierce and his colleagues (1989) argued that managerial attitudes on one's value as an organizational member directly expressed in leader-follower interactions and indirectly expressed via work systems play a major role in shaping an employee's OBSE. Accordingly, if a leader communicates trust with a follower through

trusting behaviors such as delegation and openness to voices, the feeling of being trusted by leader offers the follower a sense of worth and competence that the follower can internalize and integrate into his or her self-view, thus enhancing OBSE. Not surprisingly, empirical findings show that felt trust predicts OBSE (Lau, Lam, & Wen, 2014).

OBSE has been identified as a strong predictor of employee attitudes, motivation, and behaviors at work (Pierce & Gardner, 2004; Bowling, Eschleman, Wang, Kirkendall & Alarcon, 2010). Self-verification theory assumes that in order to bolster feeling of psychological coherence (“epistemic” concerns) and/or to ensure smooth social interactions (“pragmatic” concerns), people strive to maintain stable self-views (Swann, 1983). This self-consistency motivation drives people to select situations, process information, and behave in ways that conform to their pre-existing enduring self-views (Swann & Buhrmester, 2012). To maintain self-consistency, followers with high OBSE will engage in behaviors consistent with their beliefs about being competent, valuable, responsible, and helpful organizational members (Pierce et al., 1989). Consistent with this reasoning, empirical findings have shown that OBSE is positively related to attitudes, intentions, and behaviors that are regarded as trustworthy in organizational settings, such as organizational commitment, ethical behavioral intention, organizational citizenship behavior, job performance (see Pierce & Gardner, 2004 for a review).

Based on these arguments, I propose:

Proposition 6a: The positive relationship between follower's felt trust and follower's trustworthy behavior is mediated by follower's work-related self-efficacy and organization-based self-esteem (OBSE).

In line with the reasoning above, I also argue that a leader's felt trust motivates his or her trustworthy behavior by enhancing the leader's managerial self-efficacy and OBSE. Managerial self-efficacy refers to “the perceived capacity to be effective and influential

within the organizational domain in which one is a manager” (Fast, Burriss, & Bartel, 2014). One of the key components in a leader’s competence to be effective and influential at work is the extent to which he or she is trusted by his or her followers, because a leader can hardly influence and lead those followers who do not trust him or her (Burke, Sims, Lazzara, & Salas, 2007; Dirks & Ferrin, 2002). Understandably, leaders who know they are trusted by their followers are more likely to believe that they can influence these followers to shape common goals and achieve high group performance. Therefore, a leader’s felt trust enhances his or her managerial self-efficacy.

Similarly, leader’s felt trust also promotes leader’s OBSE because feeling trusted by followers enhances the leader’s belief that he or she is capable, significant, and worthy as an organization member. Although one’s OBSE might be influenced more by trust from leader than trust from follower, followers can also affect leader’s self-concept (Hannah, Avolio, Luthans, & Harms, 2008), especially when the leader and follower are highly interdependent.

Taken together, I propose:

Proposition 6b: The positive relationship between leader's felt trust and leader's trustworthy behavior is mediated by leader's managerial self-efficacy and organization-based self-esteem (OBSE).

Autonomous work motivation. Felt trust can also enhance trustworthy behavior through its effects on autonomous work motivation. Unlike some perspectives that regard extrinsic motivation as invariably non-autonomous, self-determination theory (Ryan & Deci, 2000) argues that extrinsic motivation can vary greatly in the extent to which its regulation is autonomous. According to the theory, the least autonomous form of extrinsic motivation is external regulation, whereas the most autonomous form of extrinsic motivation is integrated regulation. Between the two ends, there is introjected regulation and identified regulation, being progressively more autonomous. In some studies, external regulation and introjected

regulation are combined to form a controlled motivation composite, whereas identified regulation, integrated regulation, and intrinsic motivation are combined to form an autonomous motivation composite (e.g., Williams & Deci, 1996).

According to self-determination theory, controlled motivation can be transformed into autonomous motivation through the process by which relevant values, attitudes, and regulatory structures are internalized and assimilated to the self (Ryan & Deci, 2000). The theory postulates that satisfaction of three basic psychological needs—need for competence, autonomy, and relatedness—offers necessary nutrients for the process of internalization. In other words, work environments affording opportunities for people to satisfy these will maintain intrinsic motivation and facilitate full internalization of external regulation, and in turn enhance people's autonomous motivation (Gagné & Deci, 2005).

I argue that the feeling of being trusted by others at work can help satisfy needs for competence, autonomy, and relatedness. Past research establishes that competence is an essential foundation for trust assessments (Mayer et al., 1995). We have also noted that the trusting behavior of others, which are foundational for feelings of being trusted, promotes self-efficacy. Drawing on these insights, we can also argue that the psychological experience of being trusted can satisfy an individual's need for competence. Regarding the need for relatedness, trust is often a crucial and influential feature of good, beneficial, and satisfying interpersonal relationships (Blau, 1964; Graen & Uhl-Bien, 1995; Holmes & Rempel, 1989). Being trusted by others signifies that one is needed, relied upon, valued, and accepted by others. This suggests that felt trust, by its very nature, helps people experience a sense of connectedness with social others, and therefore satisfies people's need for relatedness. Finally, regarding the need for autonomy, researchers have argued that trust within occupations is indexed by the degree of autonomy accorded to role occupants (Fox, 1974; Nicholson, 1984; Whalley, 1986). Trusted parties are monitored less and accorded greater

discretion and influence (Zand, 1972; Gambetta, 1988; Gillespie, 2003; Luhmann, 1979; Mayer et al., 1995; McAllister, 1995). Thus, almost by definition, the feeling of being trusted serves to meet an individual's need for autonomy. Taken together, by satisfying the three basic psychological needs, felt trust facilitates full internalization of external regulation and maintains intrinsic motivation, and in turn promotes autonomous motivation.

Further, I argue that enhanced autonomous work motivation motivates people to behave in a trustworthy manner at work. As argued by Ryan and Deci (2000), "the fullest representations of humanity show people to be curious, vital, and self-motivated. At their best, they are agentic and inspired, striving to learn, extend themselves, master new skills, and apply their talents responsibly." (p. 68) According to self-determination theory, the persistent, proactive, positive, and responsible aspects of human nature can flourish on the conditions that social environments support the transformation from controlled motivation to autonomous motivation (Ryan & Deci, 2000). This suggests that when autonomously motivated, people work in a persistent, proactive, positive, and responsible way. Therefore, enhanced autonomous work motivation may promote organizational commitment, OCB, taking charge, improvement-oriented voice, innovation, and personal initiative which are generally regarded as trustworthy in organizational settings.

Taken together, feeling trusted facilitates the transformation from controlled motivation to autonomous motivation, and in turn motivates trustworthy behavior. This line of reasoning that associates felt trust with trustworthy behavior through autonomous work motivation can be expected to hold true for both followers and leaders in organizations. Thus, I propose:

Proposition 7a: The positive relationship between follower's felt trust and follower's trustworthy behavior is mediated by follower's autonomous work motivation.

Proposition 7b: The positive relationship between leader's felt trust and leader's trustworthy behavior is mediated by leader's autonomous work motivation.

Felt responsibility. Finally, I argue that felt trust from others provides a basis for felt responsibility that, in turn, motivates people to behave in ways that are trustworthy. Responsibility has been defined and used in a number of different ways (see Schlenker, 1997 for a brief summary of six distinct definitions or views of responsibility). In this study, responsibility refers to a course of action that is created by social roles, social norms, or moral standards and requires one to perform (Schlenker, 1997). Since externally required responsibility does not ensure that people will hold themselves responsible (Cummings & Anton, 1990), the extent to which people accept and internalize responsibility is more influential in shaping subsequent behaviors than the responsibility itself. Accordingly, I focus attention on felt responsibility as factor mediating the effects of felt trust on behavior. Consistent with previous studies (Hackman & Oldham, 1976; Morrison & Phelps, 1999), I define felt responsibility as an individual's belief that he or she is personally obligated to bring about particular behaviors and outcomes.

Felt trust promotes felt responsibility for two reasons. First, trust creates a situation in which a trustor's trusting behaviors, such as reliance and disclosure (Gillespie, 2003), expand a trustee's latitude of discretion to influence the trustor's interests (Gambetta, 1988; Luhmann, 1979; Mayer et al., 1995). In this situation, a trustee is at least partly responsible for the interests of a trustor. This situation may highlight a trustee's responsibility to engage in particular behaviors on behalf of a trustee (Bandura, 2006). Accordingly, a trusted person who knows that he or she is trusted by another individual feels responsible to fulfill the positive expectations of that trustor. Second, trust functions not only as social glue (Govier, 1997) that connects people and enables social exchanges (Blau, 1964) but also as an

organizing principle for solving problems of interdependence and uncertainty (McEvily, Perrone, & Zaheer, 2003). Since, in principle, a trustee takes action on behalf of a trustor (Mayer et al., 1995), social control mechanisms (e.g., moral standard and reputation) have evolved to preserve trust by directing a trustee to fulfill the trustor's expectations. Thus, within society, behavior demonstrating that one is worthy of trust is endowed with high moral value (Simmel, 1950). Just as important, trusted parties who value the trust of others feel responsible to fulfill the expectations of trustors as a moral obligation.

Further, felt responsibility makes people behave in ways that are trustworthy at work. When a person feels trusted and believes that he or she is personally and morally obligated to fulfill the positive expectations of trustors, his or her behaviors tend to be in line with this expectation because this type of behavior provides a sense of personal satisfaction and accomplishment (Frese, Kring, Soose, & Zempel, 1996; Graham, 1986) and discharges a moral duty. Not surprisingly, previous findings show that felt responsibility leads to high task performance (Hackman & Oldham, 1976) and helping behavior (Pearce & Gregersen, 1991). Moreover, employees with a strong sense of felt responsibility about change engage in proactive behaviors such as taking charge and voice (Bledow & Frese, 2009; Fuller, Marler, & Hester, 2006; Morrison & Phelps, 1999). In the workplace, high task performance, helping behavior, taking charge, and voice are generally regarded as trustworthy follower behaviors.

Taken together, felt trust enhances felt responsibility, and in turn motivates a person to behave in a trustworthy manner in the workplace. This line of reasoning that associates felt trust with trustworthy behavior through felt responsibility can be expected to hold true for both followers and leaders in organizations. Thus, I propose:

Proposition 8a: The positive relationship between follower's felt trust and follower's trustworthy behavior is mediated by follower's felt responsibility.

Proposition 8b: The positive relationship between leader's felt trust and leader's trustworthy behavior is mediated by leader's felt responsibility.

Interplay between Trusting and Feeling Trusted. Trust and felt trust are distinct psychological constructs, but they are not completely independent. In leader-follower trust relationships, both parties form and update their beliefs about how much they can trust each other and how much they are trusted by each other by observing behavior, making inferences about that behavior, and forming conclusions. The process of social information processing is selective and not unbiased (Fiske & Taylor, 2013). It is influenced by the beliefs that people already have in their minds (Higgins & Bargh, 1987). The extent to which a given trusting behavior leads to trustee's felt trust partly depends on whether the trustee notices it and how the trustee interprets it. When a person has a high degree of trust in his or her counterpart, the person is more likely to selectively notice the counterpart's trusting behaviors, and is more inclined to interpret these behaviors as the demonstration of the counterpart's trust in him or her (Luhmann, 1979; Robinson, 1996). Therefore, the positive relationship between a counterpart's trusting behaviors and one's felt trust is stronger when the person has high trust in the counterpart. For example, when a leader delegates important tasks to a follower, the leader actually demonstrates significant trust in the follower which should promote follower's felt trust. However, a follower who does not trust the leader's goodwill and sincerity, may interpret such delegation (i.e., trusting behavior) as an attempt to avoid responsibility or 'pass the buck'. Under this condition, the leader's trusting behavior may not increase follower's felt trust so much. Thus, I propose:

Proposition 9a: Follower's trust in leader moderates the positive relationship between leader's trusting behavior and follower's felt trust, such that the relationship is stronger when follower's trust in leader is high.

Proposition 9b: Leader's trust in follower moderates the positive relationship between follower's trusting behavior and leader's felt trust, such that the relationship is stronger when leader's trust in follower is high.

Following the same reasoning, I also argue that the positive relationship between a counterpart's trustworthy behaviors and a focal individual's trust in the counterpart is stronger when individual has high level trust in the counterpart. For instance, a leader may double-check the price list in order to demonstrate concern for his or her follower's work and to help the follower find the best suppliers and improve performance. However, if the follower does not believe that he or she is trusted by the leader, the follower may interpret this benevolent double checking (i.e., trustworthy behaviors) as a signal that the leader distrusts his or her professional competence or suspects that he or she accepts bribes. In this case, the leader's trustworthy behavior can hardly enhance follower's trust in leader. Thus, I propose:

Proposition 10a: Follower's felt trust moderates the positive relationship between leader's trustworthy behavior and follower's trust in leader, such that the relationship is stronger when follower's felt trust is high.

Proposition 10b: Leader's felt trust moderates the positive relationship between follower's trustworthy behavior and leader's trust in follower, such that the relationship is stronger when leader's felt trust is high.

Moreover, I also argue that an individual's trust in his or her counterpart will moderate the positive relationship of a person's felt trust with his or her self-concept, autonomous work motivation, and felt responsibility. First, people develop and change their self-concepts by seeing how others view them and then incorporating those views into the "self" (Cooley, 1902; Mead, 1934). Leaders are generally regarded as important sources of evaluative information about follower capabilities (Shamir, House, & Arthur, 1993). However, a

follower's trust in leader may influence how much the follower values and relies on evaluative information from leader. The follower who does not trust his or her leader may devalue the leader's evaluation of his or her professional competence. Under this condition, follower's felt trust is less likely to strengthen the follower's self-concept. Second, as already argued, feeling trusted by others enhances autonomous work motivation by satisfying needs for competence, autonomy, and relatedness. The extent to which one's felt trust contributes satisfies competence, autonomy, and relatedness needs is influenced by the person's trust in the counterpart. When a person has low trust in his or her counterpart in a trust relationship, the person tends to devalue the information cues on his or her competence offered by the counterpart, and therefore feeling trusted by this counterpart is less likely to satisfy his or her need for competence. Also, when trust is low, he or she may devalue the trust relationship and keep an eye on the counterpart in order to avoid harm. Under this condition, feeling trusted by the counterpart can hardly satisfy the person's need for relatedness and autonomy. Taken together, one's trust in a relationship counterpart moderates the positive relationship between felt trust and autonomous work motivation. Third, felt trust promotes felt responsibility because it creates a situation that evokes human agency and highlights moral obligation. However, when the person has low trust in his or her counterpart, the person tends to direct his or her effort, attention, and resources from fulfillment of responsibilities to self-protection. For instance, when a follower does not trust his or her leader to reciprocate extra contributions in the future, his or her felt responsibility may sharply decrease even if the follower believes that he or she is trusted by the leader. In sum, I propose:

Proposition 11a: Follower's trust in leader moderates the relationships of follower's felt trust with follower's self-concepts, autonomous work motivation, and felt responsibility, such that the relationships are stronger when follower's trust in leader is high.

Proposition 11b: Leader's trust in follower moderates the relationships of leader's felt trust with leader's self-concepts, autonomous work motivation, and felt responsibility, such that the relationships are stronger when leader's trust in follower is high.

Finally, I argue that felt trust moderates the positive relationship between a person's trust in a counterpart and his or her willingness to take risks in his or her relation with the counterpart. Although, as previously argued, trust increases people's willingness to take risk (Mayer et al., 1995; Dirks & Ferrin, 2002), people often consider the symbolic meaning and value of risk taking behavior before taking action (Stryker, 1980). In other words, they care about what kinds of information they may convey to their counterparts by engaging in these behaviors. When they believe that they are not trusted by their counterparts, they are more likely to expect that their counterparts will doubt their intentions and interpret their behaviors in an unfavorable way. Under this condition, they may be unwilling to engage in risk taking behaviors, even though they still trust their counterparts. For example, if a follower trusts a leader to provide compensation for authentic OCB, the follower may engage in this behavior. However, a follower who perceives that he or she is not trusted by a leader may believe that the leader will suspect his or her intentions and interpret the OCB as impression management. Therefore, the follower may reduce his or her willingness to engage in risk taking behaviors. Given this fact, I propose:

Proposition 12a: Follower's felt trust moderates the relationship of follower's trust in leader with follower's willingness to take risk in trust relation, such that the relationship is stronger when follower's felt trust is high.

Proposition 12b: Leader's felt trust moderates the relationship of leader's trust in follower with leader's willingness to take risk in trust relation, such that the relationship is stronger when leader's felt trust is high.

Discussion

My conceptual framework has substantive implications for trust scholarship. First, the proposed dual spiral model provides conceptual foundations for decoupling one's "trusting" from his or her "feeling trusted." Departing from established models of trust dynamics (Ferrin et al., 2008; Serva et al., 2005; Zand, 1972), I specify two spirals to address key antecedents, consequences, and functioning mechanisms of trust and felt trust. According to the dual spiral model, one party's trusting behavior increases the other's felt trust, which in turn leads to that party's trustworthy behavior through enhancing his or her self-concept, autonomous work motivation, and felt responsibility. Simultaneously, one party's trustworthy behavior enhances the other's trust, which in turn results in that party's trusting behavior through strengthening his or her willingness to take risk in the dyadic trust relationship.

The two spirals represent distinct loops of initiation and response that are loosely coupled. The first spiral describes leader's giving trust and follower's receiving trust—how follower evaluates and responds to leader's trust, whereas the second spiral describes follower's giving trust and leader's receiving trust—how leader evaluates and responds to follower's trust. Decoupling and specifying the two spirals allows for a more nuanced analysis on interpersonal trust dynamics and helps researchers solve some puzzles in trust literature. For instance, my conceptual framework may help scholars reduce the discrepancy that exists between existing theory and empirical findings—although trust theorists generally assert there is reciprocity in trust, empirical findings generally show low correlations between trust assessments within leader-follower dyads (Korsgaard, Brower, & Lester, 2015). As my model shows, leader's trust leads to follower's felt trust rather than follower's trust, and follower's trust results in leader's felt trust rather than leader's trust. Thus, it is not surprising to find low correlation between leader's trust and follower's trust.

Second, my dual spiral model contributes to trust literature by providing more balanced perspective on the dynamic process of leader-follower trust relationship. Established models explaining the evolution of interpersonal or intergroup trust (Ferrin et al., 2008; Serva et al., 2005; Zand, 1972) address the aspect of trusting but ignore the aspect of feeling trusted. These models are incomplete and problematic, because trusting and feeling trusted are two distinct and key aspects of trust dynamics (Sztompka, 1999). The premise of dual spiral model is that neither trust nor felt trust alone can fully capture the essence of dynamic process of interpersonal trust. The dual spiral model highlights the important roles of felt trust in explaining the dynamic process of interpersonal trust relationship by answering how and why one party responds to the other party's trust. For instance, according to the model, a leader communicates trust with his or her follower through trusting behaviors such as delegating and sharing critical information. When feeling trusted by one's leader, a follower experiences the enhancement in self-concept, autonomous work motivation, and felt responsibility. In turn, this drives the follower to respond to the leader's trust by performing those trustworthy behaviors—such as helping their colleagues, being conscientious, and taking initiative at workplace—that he or she is being trusted to perform. I maintain that only by modeling the dynamics of felt trust can we explain how and why one party responds to another party's trust. It is a core question for understanding the causal mechanisms that drive the dynamics of interpersonal trust relationships. Thus, my dual spiral model, with its focus on both trusting and feeling trusted, provides new foundations for theorizing about the evolution of interpersonal trust relationships.

Third, my dual spiral model of interpersonal trust sheds new light on mutual trust research. In his seminal study on mutual trust, Deutsch (1958) argued that mutual trust occurs when two parties trust one another at a complementary level, and each party perceives that the other party is aware of his or her intent and trust. Deutsch's approach was predicated on

the understanding that each party was aware of the other party's level of trust (Korsgaard et al., 2015). This approach also implied that the felt trust of both parties was sufficient to sustain mutual trust. The dual spiral model suggests that, for relationships of mutual trust to function effectively, high levels of both trust and felt trust are required. As discussed above, trusting leader behavior (e.g., delegating to followers) invites trustworthy follower behavior (e.g., taking responsibility) rather than trusting behavior (e.g., relying on the leader). Because of this, the extent to which followers feel trusted by their leader plays a critical role in whether followers contribute to the effective function of mutual trust relation. High trust but low felt trust may cause problems in mutual relationship down the road. Moreover, my conceptual framework models the interaction of trust and felt trust. For instance, the positive effect of follower's felt trust on trustworthy behaviors is stronger when follower's trust in leader is high, and the positive effect of follower's trust on trusting behavior is stronger when follower's felt trust by leader is high. Ultimately, this synergy between trust and felt trust further suggests that effective mutual trust relationships require high levels of both trust and felt trust.

SCALES DEVELOPMENT (ESSAY 2)

I developed new scales to measure follower's felt trust and trust in leader. Given the critical aspect of context for trust relationships, I determined that original items developed in the Chinese language would be preferred over items translated from English. In the past literature, there are two major approaches of measuring felt trust. The first approach is to directly measure a focal person's belief about the extent to which he/she is trusted by another party. For instance, Lester and Brower (2003) measured felt trust as the extent to which employees believed they were perceived by another party as trustworthy (e.g., Lester & Brower, 2003). Sample items are "my supervisor believes that I would not knowingly do anything to hurt him/her.", and "my supervisor thinks that my actions and behaviors are very consistent". Similarly, Salamon and Robinson (2008) used three items to measure felt trust: 1) "management places trust in associates at this location", 2) "management at this location believes that associates are trustworthy", and 3) "management believes that associates in this location can be trusted". The second approach measured felt trust by shifting the referent of items designed to capture trusting behavior. For example, Lau, Lam, and Wen (2014) measured the felt trust of followers by adapting the reliance and disclosure items from Gillespie's (2003) behavioral trust inventory. Similarly, Lau, Liu and Fu (2007) measured follower's felt trust as follower's response to behavioral indicators of leader's trust.

Both of these approaches have limitations. The first method requires that one party (the respondent) read the mind of the other party, and some individuals may be more effective than others in doing this. The second method has the advantage of capturing direct assessments of behavior, but the set of trusting behaviors sampled is generic and thus of limited relevance for differentiated relationships, like those between leaders and followers. Moreover, none of these measures of felt trust have been rigorously tested or validated (e.g., DeVellis, 2003).

Thus, in this study, I follow the steps recommended in the psychometric literature (e.g., DeVellis, 2003) and summarized by Hinkin (1998) to develop a new measure of felt trust. First, combining inductive and deductive approaches, I generated a pool of items and assessed the content validity of each item. Second, I further refined the set of items using exploratory factor analysis (EFA) of data from a sample of study participants. Third, I used confirmatory factor analysis with a second sample of subjects to assess the convergent and discriminant properties of measure items. Finally, using data from a third sample, I examined the nomological validity of the newly developed measure.

Item Generation

In order to establish adequate content validity, I combined deductive and inductive approaches to generate a preliminary set of items to assess follower's felt trust by leader and follower's trust in leader. Using deductive approach, I first reviewed previous research on trust and felt trust. Based on this review, I created 10 felt trust items and 8 trust items. I also collected 12 trust items from existing measures.

Having this initial item pool in hand, I shift to inductive approach. I conducted face to face interviews with 15 employees from different companies, with a focus on their experiences of trusting and being trusted, as well as their reactions to the set of measure items. Ten (10) of these employees had at least 5 years of working experience. During interviews, participants described 2 or 3 critical events that strengthened their feeling of being trusted by supervisors and 2 or 3 critical events that represented their trust in supervisor. I also showed participants the 10 felt trust items and the 20 trust items developed in the deductive stage. Participants evaluated the extent to which each item captured elements of felt trust and trust. The results indicate that the 30 items did capture the construct domain of felt trust and trust.

Then, I recruited 93 employees, from different companies and industries, enrolled in a part-time MBA course in a large university in northwest China to participate in an item generating and evaluation exercise. Of the respondents, 75.3% were men. Respondents had an average age of 31.4 years and an average of 9.3 years of working experience. Respondents were asked to describe 12 examples of feeling trusted by their supervisor and 12 examples of trusting their supervisor. In order to have a balanced design, one half of the respondents were asked to list felt trust examples first and then trust example; the other half were asked to list trust examples first and then felt trust example. Respondents reported 679 felt trust examples and 660 trust examples. On average, 7.3 felt trust examples and 7.1 trust examples were reported from this survey. Some content was repeatedly reported by different respondents. After removing duplicate content, the item pool included 192 unique felt trust items and 177 unique trust items.

Item Review

5 PhD students with organizational behavior research training independently reviewed the 202 felt trust items (including 10 items in deductive approach) and 197 trust items (including 20 items in deductive approach) generated in the item generation process. First of all, the judges evaluated whether each item was consistent with the definition of felt trust and trust used in this study. Second, they evaluated whether each item was clear and concise. Third, they evaluated whether items captured felt trust or trust that would be relevant to a wide variety of occupations and organizations. Fourth, they grouped items with shared semantic meaning together, and restated them as single items. After completion of this process, 43 felt trust items and 45 trust items survived. They represent the final item pool in this study.

Instrument Refinement

A total of 250 respondents participated in a survey for refining instrument. Respondents came from 11 different companies in different industries in northwest China. Of 225 effective respondents, 47.7% were men and 79.4% had bachelor or master degree. On average, respondents were 30.8 years old ($SD = 5.9$), had 6.4 years organizational tenure ($SD = 6.4$), and had 3.4 years relationship with their current supervisor ($SD = 3.1$).

The survey contained the 43 felt trust items and 45 trust items. Respondents were asked to recall their experience of working with the current supervisor and indicate the extent their agreement with each trust and felt trust statement on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The cover letter of survey emphasized the importance of honest responses and assured participants of confidentiality.

Following the recommendation by DeVellis (2003), I evaluated items based on two criteria: corrected item-total correlations and item variances. I eliminated items with corrected item-total correlations below .50 and items with item variances below 1.30. This process resulted in removal of 9 felt trust items and 4 trust items, leaving me with 34 felt trust items and 41 trust items. I then conducted exploratory factor analysis (principal axis factoring) with oblique rotation (direct oblimin), allowing for correlations among factors (Fabrigar, Wegener, MacCallum, & Strahan, 1999). I followed the recommendation of Bandalos and Boehm-Kaufman (2009) to use several different criteria (i.e., theoretical consideration, eigenvalues, scree plot, and parallel analysis) to determine the number of factors to retain. Because my guiding theory suggested two related factors—felt trust and trust, and hence, I first imposed a two-factor solution. Evaluation of the eigenvalues, scree plot, and parallel analysis supported the two-factor solution. Since more than half of the items had high factor loading ($>.60$) and low cross-factor loading ($<.20$), and each construct was represented by only factor, I used a very high cutoff to select out items. I use a factor loading

of .65 and a cross-factor loading of .20 as the minimum cutoff for felt trust items, and a factor loading of .75 and a cross-factor loading of .20 for trust items. After this deletion, 9 felt trust items and 15 trust items remained.

To ensure the content validity of items, and to avoid over-sampling from select portions of the construct domain, I asked a construct development expert familiar with the definition of felt trust and trust to help evaluate items. After this phase of evaluation, 7 items remained for felt trust and 7 items for trust. The wording for each item can be found in Table 1.

 Insert Table 1 about here

Instrument Validation

Instrument validation work was completed in three stages: 1) demonstrating dimensionality and internal consistency, 2) demonstrating convergent and discriminant validity, and 3) demonstrating nomological validity (DeVellis, 2003; Hinkin, 1998). Each of these stages is discussed below. Two different samples were used in these stages.

Confirmatory factor analysis. A total of 270 respondents participated in a paper-pencil based questionnaire survey. Respondents came from a single company in the aviation industry in northwest China. Of 241 effective respondents, 81.1% were male and 92.1% had at least a bachelor's degree. On average, respondents were 31.9 years old ($SD = 5.4$), had 7.1 years organizational tenure ($SD = 5.9$), and had 5.1 years relationship with their current supervisor ($SD = 4.1$).

All respondents were given a survey that included the 7 felt trust items, 7 trust items, and items of three constructs that are theoretically relevant to felt trust and trust—psychological empowerment (Spreitzer, 1995), behavioral integrity (Simons, Friedman, Liu, & Parks, 2007), and leader-member exchange (Graen & Uhl-Bien, 1995). The measure used

can be found in Appendix 1. Respondents were asked to describe the experience of working with their current supervisors and indicate the extent to their agreement with each statement on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The cover letter of survey emphasized the importance of honest responses and assured participants of confidentiality.

Using Mplus 7 (Muthén & Muthén, 1998-2012), I performed a confirmatory factor analysis (CFA) to cross-validate the two-factor solution obtained in the exploratory factor analysis. The CFA of the two-factor model yielded an adequate fit ($\chi^2 = 200.58$, $df = 76$, $p < .001$; CFI = .95; TLI = .94; RMSEA = .08; SRMR = .04). The items and the standardized factor loadings for this CFA are reported in Table 1. The CFA of the one-factor model failed to yield an adequate fit ($\chi^2 = 640.69$, $df = 77$, $p < .001$; CFI = .77; TLI = .73; RMSEA = .17; SRMR = .12). This result confirmed the two-factor structure obtained in the previous EFA. Moreover, both felt trust scale (Cronbach's alpha = .89) and trust scale (Cronbach's alpha = .95) demonstrated high internal consistency, and thus reliability.

To further demonstrate convergent and discriminant validity of measure items and constructs, I performed another CFA in which felt trust, trust, behavioral integrity, and leader-member exchange were modelled as four different factors and psychological empowerment were modelled as a second-order factor which consists of four first-order factors (i.e., meaningfulness, competence, self-determination, and impact). The CFA of this model yielded a moderate fit ($\chi^2 = 1743.94$, $df = 765$, $p < .001$; CFI = .90; TLI = .89; RMSEA = .07; SRMR = .07). However, inspection of the modification indexes, standardized residuals, and factor loadings indicated that a better fit could be obtained by removing the second-order factor and just using four first-order factors. Accordingly, I performed another CFA in which psychological empowerment was represented by four first-order factors. This improved model fit ($\chi^2 = 1638.74$, $df = 751$, $p < .001$; CFI = .91; TLI = .90; RMSEA = .07;

SRMR = .05). Furthermore, I investigated five nested alternative models and found that they did not provide a better fit to the data. In addition, the results of chi-square difference test (see Table 2) indicated that the eight-factor model was superior to all five alternative models. These results suggest that felt trust and trust measured by the scale developed in this study are correlated with but distinct from theoretically similar constructs. Thus, the results demonstrate convergent and discriminant validity of the measures.

 Insert Table 2 about here

Building nomological network. To demonstrate nomological validity of the measures, I first proposed a theoretical model (see. Figure 2) in which felt trust and trust were related to their close theoretical antecedents and consequences. First, I hypothesized that empowering leadership would be positively related to both felt trust and trust, and that the relationship between empowering leadership and felt trust would be stronger than the relationship between empowering leadership and trust. According to Ahearne, Mathieu, and Rapp's (2005) and Zhang and Bartol's (2010) conceptualization, empowering leadership involves enhancing the meaningfulness of work, fostering participation in decision making, expressing confidence in high performance, and providing autonomy from bureaucratic constraints. These behaviors are highly relevant to follower's feeling of being trusted by leader because they clearly demonstrate leader's trust in follower. On the other hand, an empowering leader helps followers understand how their work and goals fit into a bigger picture, and makes it more efficient for followers to do their jobs by keeping the rules and regulations simple (Ahearne, Mathieu, & Rapp, 2005; Zhang & Bartol, 2010). Therefore, empowering leadership also enhances a follower's trust in his or her leader. Moreover, because a leader's

empowering behavior signifies the leader's trust in follower more than the leader's trustworthiness, empowering leadership should predict follower felt trust better than trust.

Insert Figure 2 about here

Second, I hypothesized that ethical leadership would be positively related to trust, but not to felt trust. According to Brown, Treviño, and Harrison's (2005) conceptualization, ethical leaders demonstrate normatively appropriate conducts (e.g., openness, honesty, fairness, and care) through their personal actions and interpersonal relationships, and promote such conduct to followers through two-way communication, reinforcement, and decision-making. It is not surprising that ethical leader behaviors enhance the extent to which followers trust their leaders. Although ethical leadership behavior clearly demonstrates a leader's trustworthiness, such behavior does not necessarily express a leader's trust in followers. Therefore, ethical leadership may not strengthen followers' felt trust.

Third, I hypothesized that only felt trust (not trust) would be positively associated with proactive behavior. According to Horowitz, Wilson, Turan, Zolotsev, Constantino, and Henerson's (2006) interpersonal circumplex model, interpersonal motives fall into two very broad and superordinate categories—communion and agency. "A communal motive is a motive for a connection with one or more others; it is a motive to participate in a larger union with other people. An agentic motive, on the other hand, emphasizes the self as a distinct unit; it focuses on the person's own individual influence, control, or mastery over the self, other people, and the environment" (Horowitz et al., 2006, p.69). Because trust activates communal motives, trust provides a basis for reliance and disclosure (Gillespie, 2003; Zand, 1972). By way of contrast, felt trust activates agentic motives manifested in the urge to master, control and influence, because the trusted person is invited by the trustor to perform

with reliability and competence. Therefore, a follower is more likely to take initiative in challenging the status quo, influence environments, and bring about change when he or she feels trusted by his or her leader.

Finally, I hypothesized that felt trust and trust of followers would be positively associated with follower job satisfaction and task performance. In the theoretical part of this dissertation, I explained that felt trust promotes follower's OBSE and autonomous work motivation, which in turn enhances task performance and job satisfaction. Empirical evidence from Lau, Lam and Wen's (2014) study showed that followers' felt trust increased their task performance through OBSE. Lester and Brower (2003) also found that felt trust contributed to follower's job satisfaction and in-role performance.

Demonstrating nomological validity. Respondents for this study came from a single company from the automobile industry in northwest China. In total, 420 employees and their supervisors were invited to participate in a paper-pencil based questionnaire survey. Of 390 effective respondents, 88.5% were men and 72.4% had junior college or higher degree. On average, respondents were 29.3 years old ($SD = 4.5$), had 7.5 years organizational tenure ($SD = 4.2$), and had worked with their supervisors for 4.5 years ($SD = 2.6$).

Separate paper-pencil based questionnaires were prepared for supervisors and subordinates. Subordinates provided information on felt trust, trust, empowering leadership (Zhang & Bartol, 2010), ethical leadership (Brown, Treviño, & Harrison, 2005), and job satisfaction (Chen, Ployhart, Thomas, Anderson, & Bliese, 2011). Supervisors rated the proactive behavior (Griffin, Neal, & Parker, 2007) and task performance (Williams & Anderson, 1991) of subordinates. The measures used in this study can be found in Appendix 1. All items were rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Respondents were informed that the survey aimed to examine their experience of the company's human resource practices and were assured of the

confidentiality of responses. Completed surveys were individually returned to a box in the human resource department designated for this survey. Descriptive statistics for the study variables are presented in Table 3.

 Insert Table 3 about here

Using Mplus 7 (Muthén & Muthén, 1998-2012), I first performed a CFA to test whether the variables in the model are distinguishable from each other. The CFA yielded an adequate fit ($\chi^2 = 2481.66$, $df = 1246$, $p < .001$; CFI = .91; TLI = .90; RMSEA = .05; SRMR = .06). Furthermore, I investigated five alternative models and found that they did not provide a better fit to the data. In addition, the results of chi-square difference test (see Table 4) indicated that the 7-factor model was superior to all five alternative models. Taken together, these findings confirm that the variables in the model are distinguishable from one another.

 Insert Table 4 about here

Then, using Mplus 7 (Muthén & Muthén, 1998-2012), I fit a structural equation model (SEM) to test the hypothesized relationships among constructs in order to examine the nomological validity of the new measures. The structural equation model provided an adequate fit for the data ($\chi^2 = 2504.43$, $df = 1254$, $p < .001$; CFI = .91; TLI = .90; RMSEA = .05; SRMR = .06).

Standardized path coefficients are reported in Figure 2. First, as Figure 2 shows, empowering leadership was positively associated with felt trust ($\beta = .58$, $p < .001$), and also with trust ($\beta = .14$, $p < .01$). However, as predicted, the relationship of empowering leadership with felt trust was substantially stronger than with trust.

Second, ethical leadership was positively associated with trust ($\beta = .85, p < .001$), but not with felt trust ($\beta = .11, p > .05$). This result indicated that ethical leadership is a good predictor of trust, but cannot predict felt trust. This result also supported my prediction.

Third, felt trust was positively associated with proactive behavior ($\beta = .16, p < .05$), but the relationship of trust and proactive behavior was not significant ($\beta = -.02, p > .05$). This result supports my prediction that felt trust is a stronger predictor of proactive behavior than trust.

Fourth, felt trust was positively and significantly associated with job satisfaction ($\beta = .31, p < .001$), and so was trust ($\beta = .33, p < .001$). This finding supports my prediction that both felt trust and trust are positively related to job satisfaction, and that, after controlling for the effects of trust, felt trust explains additional unique variance in job satisfaction.

Finally, the relationship between felt trust and task performance was not significant ($\beta = -.09, p > .05$), but the relationship between trust and performance was positive and significant ($\beta = .42, p < .001$). This result only partially supported my theoretical prediction.

Taken together, these results provide substantial support for the nomological validity of the trust and felt trust measures that I developed in this study.

Discussion

The purpose of this essay is to systematically develop instruments to measure follower's felt trust by leader and trust in leader at the workplace. To ensure the psychometric quality of the scales, I followed systematic procedures recommended by DeVellis (2003) and Hinkin (1998) for developing new scales. I used multiple types of samples and steps to support content coverage, convergent and discriminant validity, nomological validity, and predictive power. Evidence from multiple and diverse samples reported in this chapter show that the new measures have high reliability, stable dimensionality, and predictable relationships with constructs in the nomological network of felt trust and trust.

The newly developed measures of felt trust and trust generate much opportunity for future research. With inductively derived and empirically validated measures of follower's felt trust and trust, more sophisticated studies of the antecedents and consequences of felt trust can be conducted, yielding more reliable results. More importantly, future scholars can use the instruments to further examine and understand the dynamic process of leader-follower trust relationships.

Moreover, this essay also provides empirical support for the view that felt trust and trust are distinct and need to be de-coupled in future research. The confirmatory factor analysis results in this essay indicate that felt trust and trust are operationally distinct and also have different patterns of associated with theoretically related but distinct constructs—psychological empowerment, behavioral integrity, and leader-member exchange. Moreover, the nomological network study indicated that 1) empowering leadership is a positive predictor of follower's felt trust, and ethical leadership is a positive predictor of follower's trust, 2) follower's felt trust predicts proactive behavior, but trust does not, and 3) felt trust explains unique variances in job satisfaction above and beyond trust. These results provide initial evidence to conclude that felt trust and trust represent two distinct aspects of a trust relationship.

The contributions of this essay should be understood in the light of study limitations. First, a potential limitation concerns the discriminant validity of the trust scale. The trust scale was highly correlated with ethical leadership that I examined in nomological network. This high correlation between trust and ethical leadership is not surprising, given that ethical leadership is a key antecedent of follower trust. Still, CFA results indicated that the psychometric structure is best when ethical leadership and trust are treated as distinct. Alternatively, researchers could operationalize ethical leadership as a group level construct or

collect data from a different source such as coworkers. Nevertheless, I acknowledge that the effort to establish the construct validity of the trust scale remains an ongoing process.

Third, the scale development was conducted using multiple samples from China. From the outset, my purpose was to develop an indigenous scale to test the theoretical model in Chinese cultural context. However, I recognize that the dual spiral model developed in this dissertation has applicability beyond the Chinese cultural context. I encourage future researchers to validate the felt trust and trust scales and examine the explanatory and predictive power of this dual spiral model within other cultural contexts. Given multiple efforts to develop trust relationships among global business partners, it would be helpful to understand whether perceptions and measures of felt trust and trust are similar across cultures.

THEORY TESTING (ESSAY 3)

Theory and Hypotheses

In this study, I test one part of theoretical model developed in essay 1—the mechanism through which follower felt trust (from leader) promotes follower trustworthy behaviors, and the moderating role of follower trust in leader. Specifically, I hypothesize that 1) follower’s felt trust is positively related to follower trustworthy behavior, including conscientious behavior, helping behavior, taking charge, and voice, 2) these positive relationships are mediated by three key follower psychological states, including organization-based self-esteem, autonomous work motivation, and felt responsibility, and 3) follower trust in leader moderates these mediation effects, such that these mediation effects are stronger when follower trust in leader is high. Figure 3 depicts the hypothesized model.

 Insert Figure 3 about here

To test the theoretical model, I focus on four types of behavior—conscientious behavior, helping behavior, taking charge, and voice—because these behaviors are regarded by managers and organizations as trustworthy employee behaviors at work.

Sample and Procedure

Participants were employees from two divisions of a large medical laboratory company located in two major cities in southwest and eastern China. Survey questionnaires were separately administered to supervisors and subordinates. Supervisor forms were distributed to 78 supervisors, and subordinate forms were distributed to their 284 immediate subordinates. With the assistance of the human resource department and using systematic sampling, I randomly selected three or four immediate subordinates for each supervisor in order to ensure objectivity in the ratings of the indicators of interest. For employees working at remote

locations (e.g., 50% of employees work in one of 25 different small cities in China), I used an online survey rather than a paper-pencil format. Using ANOVA, I compared the data collected with online and paper-pencil surveys. With only one exception, I found no significant differences in means. Therefore, I combined the data to form a single dataset.

Division managers of the company informed all participants that the survey was about their experience of the company's human resource practices and assured them of the confidentiality of responses. Completed questionnaires were returned directly to the researcher. In total, complete responses were obtained from 65 supervisors (83.3% response rate) and 218 subordinates (76.8% response rate). After deleting records with unmatched supervisor-subordinate pairs, a total of 138 supervisor-subordinate dyads remained and constituted the sample for this study.

Of the 138 employee participants, 58.0% were women and 82.7% had junior college or higher degree. On average, respondents were 28.0 years of age ($SD = 4.5$), had been with the organization for 3.2 years ($SD = 2.4$), and had worked with the current supervisor for 2.3 years ($SD = 1.6$).

Measures

Supervisors answered questions concerning the behavior of each subordinate participating in the study. Subordinates answered questions about how much they trusted and felt trusted by their leader, OBSE, autonomous work motivation, felt responsibility, and demographic information.

Felt trust and trust. Follower's felt trust and trust were assessed with the 7-item measures developed in essay 2 of this dissertation. All items were rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The felt trust scale's reliability was .89, and the trust scale's reliability was .94.

OBSE. Follower OBSE was assessed with a 10-item measure developed by Pierce and colleagues (1989). Sample items are “I count around here” and “I am valuable”. All items (see Appendix 1) were rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale's reliability was .93.

Felt responsibility. Following the procedure developed by Morrison (1994), I adapted the scales of conscientiousness (Farh, Earley, & Lin, 1997; Podsakoff, MacKenzie, Moorman, & Fetter, 1990), taking charge (Morrison & Phelps, 1999), helping (Podsakoff et al., 1990), prohibitive voice and promotive voice (Liang, Farh, & Farh, 2012) to assess follower's felt responsibility for carrying out these behaviors at workplace. Felt responsibility for conscientious behavior was measured by 6 items. Four of six items were adopted from Farh and his colleagues' (1997) conscientiousness scale, and the other two items were adopted from Podsakoff and his colleagues' (1990) conscientiousness scale. Sample items are “takes my job seriously and rarely makes mistakes.” and “tries hard to self-study to increase the quality of work outputs”. To limit the length of questionnaire, I used the six highest loading items from Morrison and Phelps' (1999) to measure taking charge. A sample items is “often tries to bring about improved procedures for the work unit or department.” Respondents were asked to indicate the extent to which they are responsible for perform the behavior mentioned in each item on a 5-point Likert scale ranging from 1 (not at all responsible) to 5 (completely responsible). Felt responsibility for helping behavior, prohibitive voice, and promotive voice were measured in similar way. The scale reliability was .89 for felt responsibility for conscientious behavior, .91 for felt responsibility for taking charge, .95 for felt responsibility for helping, .90 for felt responsibility for prohibitive voice, and .95 for felt responsibility for promotive voice.

Autonomous work motivation. I assessed autonomous work motivation with the goal-based self-concordance measure developed by Sheldon and Elliot (1998) and validated by

Bono and Judge (2003) and by Judge, Bono, Erez, and Locke (2005). Subordinates were asked to identify four job-related goals that could be accomplished in 60 days and explain their reasons for pursuing each of these goals. Specifically, for each goal identified, respondents answered four questions (see Appendix 1) that correspond with the four types of motivation that comprise the self-concordance construct (external, introjected, identified, and intrinsic). Responses options ranged from 1 (not at all for this reason) to 7 (completely for this reason). Responses were averaged across the four goals to form a single score for external, introjected, identified, and intrinsic motivation. Following Sheldon and Elliot (1998), I formed a self-concordance composite by adding together the Intrinsic and Identified Scales and subtracting the summed External and Introjected Scales. I calculated the reliability of this composite using procedures recommended by Hunter and Schmidt (1990). The composite reliability is .88.

Conscientious behavior. Follower's conscientious behavior was assessed by the same 6 items measuring felt responsibility for conscientious behavior (see Appendix 1). A sample item is "does not mind taking on new or challenging assignments". Supervisors rated the extent to which they agree or disagree with the description in each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale's reliability was .89.

Taking charge. Follower's taking charge was assessed by the same 6 items measuring felt responsibility for taking charge. A sample item is "this person often tries to introduce new structures, technologies, or approaches to improve efficiency". Supervisors were asked to rate the extent to which they agree or disagree with the description in each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale's reliability was .93.

Helping behavior. Follower's helping behavior was assessed by the same 5 items measuring felt responsibility for helping. A sample item is "this person helps orient new

people even though it is not required”. Supervisors were asked to rate the extent to which they agree or disagree with the description in each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale’s reliability was .95.

Promotive voice. Follower’s promotive voice was assessed by the same 5 items measuring felt responsibility for promotive voice. A sample item is “dare to voice out opinions on things that might affect efficiency in the work unit, even if that would embarrass others”. Supervisors were asked to rate the extent to which they agree or disagree with the description in each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale’s reliability was .88.

Prohibitive voice. Follower’s prohibitive voice was assessed by the same 5 items measuring felt responsibility for prohibitive voice. A sample item is “proactively voice out constructive suggestions that help the unit reach its goals.” Supervisors were asked to rate the extent to which they agree or disagree with the description in each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale’s reliability was .91.

Controls. Subordinate’s age, gender, education level, organizational tenure, and length of relationship with the current supervisor were controlled in this study. Age, organizational tenure, and length of relationship were measured in years. Gender was coded 1 for “male” and 0 for “female.” Education level was coded 1 for “secondary school”, 2 for “high school or technical school”, 3 for “junior college”, 4 for “college”, and 5 for “graduate school.”

Analysis Results

To examine the distinctiveness of the study variables, I conducted a CFA with the indicators of all 13 latent constructs using Mplus 7 (Muthén & Muthén, 1998-2012). Autonomous work motivation was not included in this analysis because it was operationalized as a composite variable, not a latent construct with multiple indicators. The CFA of this 13-factor model yielded moderate fit ($\chi^2 = 5194.55$, $df = 2847$, $p < .001$; CFI

= .87; TLI = .86; RMSEA = .06; SRMR = .06). However, inspection of the modification indexes indicated that a better fit could be obtained by correlating errors of some indicators within the same factor. All high values of modification index were appeared among the indicators within the same factors, instead of cross different factors. Accordingly, I performed another CFA in which errors of indicators within the same factor suggested by modification indexes were correlated with each other. This improved model fit ($\chi^2 = 4620.86$, $df = 2822$, $p < .001$; CFI = .90; TLI = .89; RMSEA = .05; SRMR = .06).

I also compared the CFA result of 13-factor model with the CFA results of nested alternative models. Table 5 presents the results of the CFA that examined the distinctiveness of the study variables. As shown in this table, the fit indices revealed the hypothesized eight-factor model fit better than any alternative nested model, indicating support for the distinctiveness of the constructs in the study.

 Insert Table 5 about here

Table 6 presents the means, standard deviations, and correlations among the study variables and the controls. Tables 7, 8, and 9 present results of the regression analysis.

 Insert Table 6 about here

Testing main effects. First, I tested whether follower's felt trust is positively related to follower's conscientious behavior, helping behavior, taking charge, promotive voice, and prohibitive voice. As shown in Table 7, controlling for trust, felt trust was not significantly related to conscientious behavior ($\beta = .07$, $p > .05$) (model 3), but it was positively and significantly related to taking charge ($\beta = .26$, $p < .01$) (model 6), helping behavior ($\beta = .26$, p

< .01) (model 9), prohibitive voice ($\beta = .23$, $p < .05$) (model 12), and promotive voice ($\beta = .26$, $p < .01$) (model 15). Taken together, these results partially support my hypothesis that felt trust is positively related to trustworthy behavior (taking charge, helping behavior, and voice). However, the hypothesized positive relationship between felt trust and conscientious behavior was not supported by this data. In all of these analyses, trust was included as a control variable. Therefore, these results indicate that felt trust explains unique variance in taking charge, helping, and voice above and beyond any variance explained by trust. I further discuss this point in the discussion part.

 Insert Table 7 about here

Testing mediation effects. Second, I hypothesized that OBSE, felt responsibility, and autonomous work motivation would mediate the positive relationship of felt trust with the five forms of trustworthy behavior—conscientious behavior, helping behavior, taking charge, promotive voice, and prohibitive voice. I tested these hypotheses using Hayes’ PROCESS macro for SPSS (Hayes, 2012-2015), a bootstrapping procedure that computes confidence intervals for the indirect effect associated with each mediator and dependent variable. I used bias-corrected bootstrapping confidence interval analyses with 5,000 bootstrap resamples. Table 8 present the results of this analysis of mediation.

Preacher and Hayes (2008) have identified several advantages in using this method to test a multi-mediator model. First, the method tests each specific indirect effect while controlling for other possible indirect effects. This ensures that the findings are specific to each mediator. Second, this method reduces the number of inferential tests required and the possibility of Type I error inflation by testing all the hypothesized indirect effects in one statistical model. Third, the method does not impose an assumption of normality on the

sampling distribution, as this assumption is often violated in small to moderate-sized samples. Using this method, we construct 95% confidence intervals for each hypothesized mediation path. If the range of 95% confidence interval of an indirect effect does not include 0, then the mediation path is significant at .05 level of significance (Preacher & Hayes, 2008).

 Insert Table 8 about here

As shown in Table 8, with regard to conscientious behavior, with trust controlled as a covariate of the dependent variable, the 95% bias-corrected bootstrapping confidence intervals of effect sizes for the three specific indirect paths (1.FT→OBSE→ Conscientious Behavior; 2.FT→AWM→ Conscientious Behavior; 3.FT→FRC→Conscientious Behavior) included zero. Moreover, the 95% bias-corrected bootstrapping confidence interval for the total indirect effect of felt trust on conscientious behavior also included zero. Thus, these results did not support my hypothesis that OBSE, autonomous work motivation, and felt responsibility mediate the positive relationship between felt trust and conscientious behavior.

With regard to taking charge, the 95% bias-corrected bootstrapping confidence intervals of effect sizes for the three specific indirect paths (1.FT→OBSE→Taking Charge; 2.FT→AWM→Taking Charge; 3.FT→FRTC→ Taking Charge) included zero. However, the effect size for the total indirect effect of felt trust on taking charge is .114 and the range of 95% bias-corrected bootstrapping confidence interval for this effect did not include zero (95% bias-corrected bootstrap CI [.007, .236]). Therefore, these results indicated that the three intervening variables jointly mediated the positive relationship between felt trust and taking charge, which partially supports my hypothesis.

With regard to helping, the 95% bias-corrected bootstrapping confidence intervals of effect sizes for the three specific indirect paths (1.FT→OBSE→Helping;

2.FT→AWM→Helping; 3.FT→FRH→ Helping) included zero. Moreover, the range of 95% bias-corrected bootstrapping confidence interval for the total indirect effect of felt trust on helping behavior also included zero. Thus, these results did not support my hypothesis that OBSE, autonomous work motivation, and felt responsibility mediate the positive relationship between felt trust and helping behavior.

With regard to prohibitive voice, the ranges of bias-corrected bootstrapping CI of effect size of three specific indirect (1.FT→OBSE→Prohibitive Voice; 2.FT→AWM→ Prohibitive Voice; 3.FT→FR Prohibitive Voice→ Prohibitive Voice) included zero. Moreover, the range of 95% bias-corrected bootstrapping confidence interval for the total indirect effect of felt trust on prohibitive voice also included zero. Thus, this result did not support my hypothesis that OBSE, autonomous work motivation, and felt responsibility mediate the positive relationship between felt trust and prohibitive voice.

With regard to promotive voice, the 95% bias-corrected bootstrapping confidence intervals of effects for two specific indirect paths (1.FT→OBSE→Promotive Voice; 2.FT→AWM→ Promotive Voice) included zero. However, the effect size for the indirect effect of felt trust on promotive voice through felt responsibility for promotive voice was .134 and the 95% bias-corrected bootstrapping confidence interval for this effect did not include zero [.044, .247]. Thus, this result supports my hypothesis that felt responsibility mediates the positive relationship between felt trust and promotive voice.

Taken together, these mixed results provide partial support for my hypotheses. These mixed results seem to indicate that only the effect of felt trust on those proactive behavior (i.e., taking charge and promotive voice in this study) is mediated by the hypothesized mediators.

Testing moderated mediation. Finally, I hypothesized that trust would moderate the indirect effect of felt trust on trustworthy behavior, such that the indirect effect would be

stronger when trust is high. To test this hypothesis, I also used Hayes' PROCESS macro for SPSS (Hayes, 2012-2015). This SPSS macro can provide an index of moderated mediation. This test establishes whether or not the index of moderated mediation is different from zero at a specific level of confidence. If the range of 95% bias-corrected bootstrapping confidence interval does not include 0, then one can conclude that there is evidence of moderated mediation at the .05 level of significance (Hayes, 2015).

 Insert Table 9 about here

As shown in Table 9, the 95% bias-corrected bootstrapping confidence intervals for indexes of moderated mediation of all five regression models included zero. These results indicated that all the hypothesized moderated mediation effects are not significant. Thus, my hypotheses were not supported by this data. I will further discuss these results in discussion part.

Discussion

This study offers initial evidence in support of my dual spiral model of leader-follower trust. Followers' felt trust directly predicted their trustworthy behaviors, including taking charge, helping behavior, promotive voice, and prohibitive voice, even after controlling for the influence of trust. In addition, the effect of felt trust on promotive voice was partially mediated by felt responsibility, and the effect of felt trust on taking charge was also partially mediated by OBSE, autonomous work motivation, and felt responsibility together.

The present research offers several central implications for theory and research on trust and proactive behavior. First and foremost, my theory and findings advance our understanding of how feeling trusted differs from trusting. The results show that follower's felt trust plays a more important role in predicting follower's trustworthy behaviors than trust

does. For instance, follower's felt trust enhances his or her taking charge and voice; however, follower's trust does not promote taking charge and voice when controlling the effect of felt trust. This finding is very consistent with my dual spiral model and supports my argument that felt trust and trust are conceptually distinct constructs.

Second, the findings from this research also extend our understanding of the psychological mechanism through which felt trust promotes trustworthy behaviors. Although previous research on felt trust (Lau & Lam, 2008; Lester & Brower, 2003) has documented the positive relationship of felt trust with desirable outcomes such as task performance, OCB, and job satisfaction, only a few studies have empirically examined the psychological mechanisms that might explain this effect. For instance, Salamon and Robinson (2008) found that responsibility norms within teams fully mediate the effect of collective felt trust on team sales performance. Lau and her colleagues (2014) found that employees' OBSE mediates the effect of employees' felt trust on individual work performance. Extending this line of research, I examined three different mediating variables—OBSE, autonomous work motivation, and felt responsibility. The results showed that the effect of felt trust on promotive voice was partially mediated by felt responsibility, and the effect of felt trust on taking charge was also partially mediated by OBSE, autonomous work motivation, and felt responsibility together. Such evidence takes a step toward demonstrating how and why followers who believe that they are trusted by their leaders show trustworthy behaviors.

Finally, my research reveals the role of felt trust in promoting proactive behavior. Given the increasing importance of proactivity in today's organization, the past two decades have witnessed a proliferation of research on proactive behaviors (Bindl & Parker, 2010). However, research on proactive behavior has rarely examined the influence of trust relationship on proactive behaviors. Parker, Williams, and Turner's study (2006) is a notable exception. In this study, Parker and her colleague found that coworker trust increases

proactive behavior through enlarging flexible role orientation. Distinct from this study which examines the effect of trust, my study investigates the effect of felt trust on proactive behavior. My findings reveal that followers' felt trust does play an important role in promoting their proactive behaviors like taking charge, promotive voice, and prohibitive voice. More importantly, this effect still holds even after controlling for the influence of trust. However the positive effect of trust on taking charge, promotive voice, and prohibitive voice does not hold when controlling the influence of felt trust. This evidence suggests that felt trust is more important than trust in generating some forms of proactive behavior.

The contributions of this dissertation should be understood in the light of study limitations, several of which suggest productive directions for future research. First, although my theoretical model implies a specific causal order, I rely on cross-sectional data, which prohibits me from making conclusive causal inferences regarding the chain of effects. Despite this limitation, the pattern of relationships I find is consistent with the specific causal understanding presented here, thus providing initial support for the model. Nevertheless, it is important for future study to test this dynamic model more rigorously, for example by employing a cross-lagged panel design or event sampling methodology.

Second, I did not find evidence that OBSE, autonomous work motivation, and felt responsibility mediate the positive effects of felt trust on conscientious behavior, prohibitive voice, and helping. One possible reason for this non-significant result is that follower's OBSE, autonomous work motivation, and felt responsibility are likely affected not only by leader-follower trust relations, but also by coworker trust relations and person-job fit. Another possible explanation for the non-significant result is that the three variables may mediate the effect of felt trust on trustworthy behaviors that entail substantially greater proactivity (e.g., taking charge and promotive voice), but may not mediate the effect of felt

trust on trustworthy behaviors that entail less proactivity (e.g., conscientious behavior and helping). This is a distinction that merits more systematic attention in future research.

Third, I also did not find evidence for my hypotheses that follower's trust moderates the indirect effects of felt trust on trustworthy behavior. However, reviewing the range of 95% bias-corrected bootstrapping confidence intervals of all indexes of moderated mediation, I find that the upper bounds of most of confidence interval of these indexes are very close to zero. Considering the small sample size (Listwise $N = 138$) of this study, it is possible that I will form different conclusions in a follow-up study with an increased number of subjects. Thus, future research may further test these hypotheses using a large sample.

CONCLUSION

Research on the dynamics of interpersonal trust in social and organizational sciences is in its nascent stages. Although both trust and felt trust are the “DNA” of interpersonal trust, extant trust research appears skewed toward the side of trust. Now, more than ever, systematic and balanced research on the dynamics of both felt trust and trust is needed. This dissertation represents an initial attempt to explore this phenomenon. My conceptual framework lays the foundation for decoupling trust from felt trust and allows for a more nuanced study on the dynamic process of leader-follower trust relationship. My dissertation also offers researchers instruments with sound psychometric properties to empirically examine research questions related to employee’s felt trust by leader and/or trust in leader. In conclusion, my dissertation provides an appropriate starting point for future inquiry, and I invite researchers to develop a more holistic understanding of interpersonal trust dynamics.

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TABLE 1
Trust and Felt Trust Items and Factor Loading ^a

Items	EFA Study	CFA ^b in Validation Study	CFA in Nomological Study ^c	CFA in Theory Test Study ^d
<i>Felt Trust</i>				
1. My leader allows me to participate in important decision making in my department.	.83	.69	.73	.73
2. When there is an opportunity for promotion, my leader recommends me before anyone else.	.81	.81	.77	.85
3. When my colleagues and I have differences in opinion, my leader supports my opinion.	.77	.70	.54	.73
4. My leader introduces me to his/her business network.	.73	.83	.80	.78
5. My leader shares with me his/her feelings and opinions.	.72	.73	.64	.64
6. My leader invites me to his/her private social gatherings.	.68	.76	.72	.68
7. My leader puts me in charge when he/she is away on leave or business.	.65	.65	.70	.77
<i>Trust</i>				
1. I believe that my leader would keep his promise.	.98	.84	.79	.91
2. I believe that my leader will not give me a hard time even if he/she has an opportunity to do so.	.94	.86	.75	.90
3. At work, my leader sets a good model for us.	.90	.81	.81	.86
4. My leader is extremely dependable, especially when it comes to things which are important to me.	.85	.85	.83	.88
5. I believe that my leader tells me the truth.	.80	.88	.80	.88
6. I believe that my leader is discerning and does not easily believe in negative news about me.	.76	.85	.82	.84
7. I believe that my leader is able to effectively lead us in overcoming huge difficulties to achieve success.	.75	.83	.79	.88

^a Standardized item loadings reported for CFA. $p < .001$ for all loadings.

^b This CFA model only included two factors—felt trust and trust. The model fit indexes are $\chi^2 = 200.58$, $df = 76$, $p < .001$; CFI = .95; TLI = .94; RMSEA = .08; SRMR = .04.

^c This CFA model included 7 factors—felt trust, trust, ethical leadership, empowering leadership, proactive behavior, job satisfaction, and task performance. The model fit indexes are $\chi^2 = 2481.66$, $df = 1246$, $p < .001$; CFI = .91; TLI = .90; RMSEA = .05; SRMR = .06.

^d This CFA model included 13 factors—felt trust, trust, OBSE, 5 felt responsibility factors, and 5 behavior factors. The model fit indexes are $\chi^2 = 5194.55$, $df = 2847$, $p < .001$; CFI = .87; TLI = .86; RMSEA = .06; SRMR = .06.

TABLE 2
Confirmatory Factor Analysis of Nested Models ^a

Model	Description	χ^2	df	CFI	TLI	RMSEA	SRMR	Change from Model 1	
								$\Delta\chi^2$	Δdf
Model 1	8-factor model	1638.74	751	.91	.90	.07	.05		
Model 2	9-factor model	1743.94	765	.90	.89	.07	.07	105.20***	14
Model 3	7-factor model	2141.69	758	.86	.84	.09	.07	502.95***	7
Model 4	7-factor model	1855.93	758	.89	.88	.08	.06	217.19***	7
Model 5	4-factor model	3341.80	773	.73	.72	.12	.10	1703.06***	22
Model 6	5-factor model	2341.25	764	.84	.82	.09	.08	702.51***	13

a. Model 1 is the hypothesized model including eight factors (i.e., felt trust, trust, behavioral integrity, LMX, meaningfulness, competence, self-determination, and impact). In the model 2, four first-order factors are subsumed into a second-order factor (i.e., psychological empowerment). In the model 3, felt trust and trust are combined, paralleled with four first-order factors of psychological empowerment. In the model 4, trust and behavioral integrity are combined, paralleled with four first-order factors of psychological empowerment. In the model 5, felt trust and psychological empowerment are combined to form a single factor, paralleled with trust, LMX and behavioral integrity. In the model 6, felt trust, trust, LMX are combined to form a single factor, paralleled with four first-order factors of psychological empowerment.

*** $p < .001$

TABLE 3
Mean, Standard Deviations, Correlations, and Scale Reliabilities in Nomological Validity Study ^a

No.	Variables	Mean	S.D.	1	2	3	4	5	6	7
1	Empowering leadership	5.06	0.99	(.92)						
2	Ethical leadership	5.08	1.07	.71**	(.94)					
3	Felt Trust	4.45	1.10	.61**	.53**	(.88)				
4	Trust	5.21	1.08	.71**	.89**	.49**	(.93)			
5	Proactive behavior	5.05	0.95	-.00	.04	.11	.01	(.92)		
6	Job Satisfaction	4.69	1.31	.39**	.50**	.46**	.46**	.03	(.90)	
7	Task performance	5.57	0.90	.23**	.26**	.06	.24**	.43**	.03	(.88)

a. N = 318 (Listwise). Scale reliabilities are on the diagonal in parentheses.

* p < .05; ** p < .01; Two-tailed tests.

TABLE 4
Confirmatory Factor Analysis of Nested Models in Nomological Validity Study ^a

Model	Description	χ^2	df	CFI	TLI	RMSEA	SRMR	Change from Model 1	
								$\Delta\chi^2$	Δdf
Model 1	7-factor model	2481.66	1246	.91	.90	.05	.06		
Model 2	6-factor model	3205.05	1256	.86	.85	.06	.07	723.39***	10
Model 3	6-factor model	2537.55	1252	.91	.90	.05	.06	55.89***	6
Model 4	6-factor model	3156.43	1252	.86	.85	.06	.07	674.77***	6
Model 5	6-factor model	3923.23	1255	.81	.79	.07	.15	1441.57***	9
Model 6	6-factor model	3291.81	1256	.85	.84	.06	.07	810.15***	10

a. Model 1 is the hypothesized model including seven factors (i.e., felt trust, trust, ethical leadership, empowering leadership, proactive behavior, job satisfaction, and task performance). In the model 2, felt trust and empowering leadership are combined. In the model 3, trust and ethical leadership are combined. In the model 4, felt trust and trust are combined. In the model 5, felt trust and proactive behavior are combined. In the model 6, ethical leadership and empowering leadership are combined.

*** $p < .001$

TABLE 5
Confirmatory Factor Analysis of Nested Models in Theory Testing Study ^a

Model	Description	χ^2	df	CFI	TLI	RMSEA	SRMR	Change from Model 1	
								$\Delta\chi^2$	Δdf
Model 1	13-factor model	5194.55	2847	.87	.86	.06	.06		
Model 2	12-factor model	5626.85	2859	.84	.84	.06	.07	432.30***	12
Model 3	12-factor model	5647.30	2859	.84	.83	.06	.07	452.75***	12
Model 4	9-factor model	7041.46	2889	.77	.76	.07	.08	1846.91***	42
Model 5	9-factor model	6622.01	2889	.79	.78	.07	.07	1427.46***	42
Model 6	8-factor model	7675.67	2897	.72	.72	.08	.10	2481.12***	50

a. Model 1 is the hypothesized model including 13 factors (i.e., felt trust, trust, OBSE, five felt responsibility factors, and five behavioral factors). In the model 2, felt trust and trust are combined. In the model 3, felt trust and OBSE are combined. In the model 4, five felt responsibility factors are combined. In the model 5, five behavioral factors are combined. In the model 6, felt trust and five felt responsibility factors are combined.

*** $p < .001$

TABLE 6
Mean, Standard Deviations, Correlations, and Scale Reliabilities in Theory Testing Study ^a

No.	Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9
1	Age	28.04	4.51	-								
2	Gender	0.42	0.50	.08	-							
3	Education	3.28	0.83	-.34**	.03	-						
4	Tenure	3.19	2.42	.49**	.11	-.16	-					
5	Relation Length	2.30	1.64	.32**	.09	-.12	.78**	-				
6	Felt Trust	4.64	1.07	-.05	.24**	.01	.12	.19*	(.88)			
7	Trust	5.77	0.84	-.04	.22*	-.14	.09	.17*	.56**	(.94)		
8	OBSE	5.59	0.80	.03	.23**	-.14	.19*	.26**	.57**	.63**	(.93)	
9	Autonomous work motivation	0.76	1.43	-.12	-.12	-.06	-.00	.08	.10	.04	-.08	(.88)
10	FR conscientious behavior	4.48	0.55	-.06	.06	-.13	.06	.12	.32**	.44**	.50**	.18*
11	FR taking charge	3.87	0.80	.04	.14	-.01	.24**	.22*	.53**	.31**	.50**	.14
12	FR helping	4.28	0.74	-.10	.10	-.05	.07	.16	.32**	.26**	.54**	.06
13	FR prohibitive voice	3.97	0.73	.08	.12	-.15	.14	.17	.36**	.33**	.50**	.04
14	FR promotive voice	3.88	0.85	-.01	.15	-.02	.10	.13	.51**	.39**	.59**	.12
15	Conscientious behavior	5.70	0.85	-.01	.02	-.04	.09	.21*	.19*	.23**	.18*	.19*
16	Taking charge	5.02	0.82	-.01	.10	-.02	.06	.12	.38**	.33**	.36**	.10
17	Helping	5.82	0.82	-.19*	.00	.06	.01	.12	.35**	.28**	.27**	.16
18	Prohibitive voice	4.90	0.89	-.03	.09	.09	-.05	.06	.29**	.25**	.24**	.01
19	Promotive voice	5.05	0.90	.07	.13	-.02	.14	.20*	.40**	.33**	.35**	.16

a. N = 138 (Listwise). Scale reliabilities are on the diagonal in parentheses.

* p < .05; ** p < .01; Two-tailed tests.

TABLE 6 (continued)**Mean, Standard Deviations, Correlations, and Scale Reliabilities in Theory Testing Study ^a**

No.	Variables	10	11	12	13	14	15	16	17	18	19
10	FR conscientious behavior	(.89)									
11	FR taking charge	.47**	(.91)								
12	FR helping	.53**	.47**	(.95)							
13	FR prohibitive voice	.61**	.60**	.66**	(.90)						
14	FR promotive voice	.49**	.75**	.64**	.71**	(.95)					
15	Conscientious behavior	.20*	.14	.11	.15	.18*	(.89)				
16	Taking charge	.27**	.29**	.17*	.29**	.30**	.62**	(.93)			
17	Helping	.21*	.21*	.20*	.27**	.32**	.63**	.57**	(.95)		
18	Prohibitive voice	.14	.22*	.14	.19*	.31**	.48**	.66**	.52**	(.88)	
19	Promotive voice	.24**	.32**	.27**	.42**	.46**	.57**	.76**	.59**	.69**	(.91)

a. N = 138 (Listwise). Scale reliabilities are on the diagonal in parentheses.

* p < .05; ** p < .01; Two-tailed tests.

TABLE 7

Regression Analysis of Effects of Felt Trust on Trustworthy Behaviors, Controlling for Trust and Demographic Variables ^{a, b}

Variable	Dependent Variable														
	Conscientious Behavior			Taking Charge			Helping			Prohibitive Voice			Promotive Voice		
	M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8	M 9	M 10	M 11	M 12	M 13	M 14	M 15
Age	-.06	-.03	-.02	-.04	.01	.03	-.23*	-.19	-.17	.04	.08	.09	.01	.06	.08
Gender	.01	-.03	-.04	.10	.03	-.01	.01	-.05	-.09	.09	.04	.01	.11	.04	.01
Education	-.04	-.01	-.01	-.02	.04	.01	.00	.05	.03	.09	.13	.11	-.00	.05	.03
Tenure	-.14	-.13	-.13	-.07	-.05	-.06	-.08	-.06	-.07	-.26	-.24	-.25	-.05	-.03	-.04
Relation Length	.33*	.29*	.28*	.17	.10	.07	.25	.19	.16	.25	.19	.17	.22	.15	.12
Trust		.20*	.17		.32***	.17		.27**	.13		.25**	.14		.31***	.16
Felt Trust			.07			.28**			.27**			.21*			.30**
R²	.06	.09	.10	.03	.12	.17	.07	.14	.18	.04	.10	.13	.05	.14	.20
Adjusted R²	.02	.05	.05	-.01	.07	.12	.04	.10	.14	.01	.06	.08	.02	.10	.15
ΔR^2	.06	.04*	.00	.03	.09***	.05**	.07	.06**	.05**	.04	.06**	.03*	.05	.09***	.06**

a. N = 138 (Listwise). Estimates are standardized regression coefficients.

* p < .05; ** p < .01; *** p < .001; Two-tailed tests.

TABLE 8
Mediation Analysis Results ^{a, b}

	Conscientious Behavior			Taking Charge			Helping		
	Estimate	Bias-Corrected Bootstrap CI 95%		Estimate	Bias-Corrected Bootstrap CI 95%		Estimate	Bias-Corrected Bootstrap CI 95%	
		Lower	Upper		Lower	Upper		Lower	Upper
Total Effect^c	.059	-.101	.219	.225	.075	.374	.230	.071	.390
Direct Effect	.038	-.130	.207	.146	-.022	.314	.203	.033	.373
Total Indirect Effect	.030	-.072	.159	.114	.007	.236	.046	-.037	.139
Specific Indirect Effect									
OBSE	.005	-.097	.124	.072	-.037	.189	.035	-.063	.137
Autonomous Work Motivation	.010	-.007	.051	.005	-.004	.042	.003	-.008	.034
Felt Responsibility	.015	-.037	.076	.037	-.052	.120	.007	-.036	.063

a. N = 138 (Listwise).

b. Unstandardized estimates of effects are reported here.

c. Total effect of felt trust on corresponding dependent variable, combining direct and total indirect effect together.

TABLE 8 (continued)
Mediation Analysis Results^{a, b}

	Prohibitive Voice			Promotive Voice		
	Estimate	Bias-Corrected Bootstrap CI 95%		Estimate	Bias-Corrected Bootstrap CI 95%	
		Lower	Upper		Lower	Upper
Total Effect^c	.195	.024	.366	.243	.082	.404
Direct Effect	.170	-.013	.352	.130	-.038	.298
Total Indirect Effect	.047	-.056	.151	.129	.024	.250
Specific Indirect Effect						
OBSE	.028	-.072	.135	-.013	-.117	.099
Autonomous Work Motivation	-.003	-.038	.007	.007	-.004	.046
Felt Responsibility	.022	-.028	.094	.134	.044	.247

a. N = 138 (Listwise).

b. Unstandardized estimates of effects are reported here.

c. Total effect of felt trust on corresponding dependent variable, combining direct and total indirect effect together.

TABLE 9
Moderated Mediation Analysis Results^{a, b, c}

	Conscientious Behavior			Taking Charge			Helping		
	Index	Bias-Corrected Bootstrap CI 95%		Index	Bias-Corrected Bootstrap CI 95%		Index	Bias-Corrected Bootstrap CI 95%	
		Lower	Upper		Lower	Upper		Lower	Upper
Mediator									
OBSE	-.001	-.030	.008	-.002	-.037	.018	-.002	-.031	.007
Autonomous Work Motivation	-.011	-.061	.010	-.005	-.047	.006	-.004	-.045	.009
Felt Responsibility	-.006	-.058	.006	.003	-.007	.035	-.002	-.041	.011

- a. N = 138 (Listwise).
b. Unstandardized estimates of effects are reported here.
c. Moderator is trust.

TABLE 9 (continued)
Moderated Mediation Analysis Results^{a, b, c}

	Prohibitive Voice			Promotive Voice		
	Index	Bias-Corrected Bootstrap CI 95%		Index	Bias-Corrected Bootstrap CI 95%	
		Lower	Upper		Lower	Upper
Mediator						
OBSE	-.002	-.037	.008	-.001	-.022	.009
Autonomous Work Motivation	.003	-.009	.043	-.009	-.055	.008
Felt Responsibility	-.003	-.032	.005	-.010	-.073	.032

a. N = 138 (Listwise).

b. Unstandardized estimates of effects are reported here.

c. Moderator is trust.

FIGURE 1

A Dual Spiral Model of the Dynamics of Leader-Follower Trust Relationship

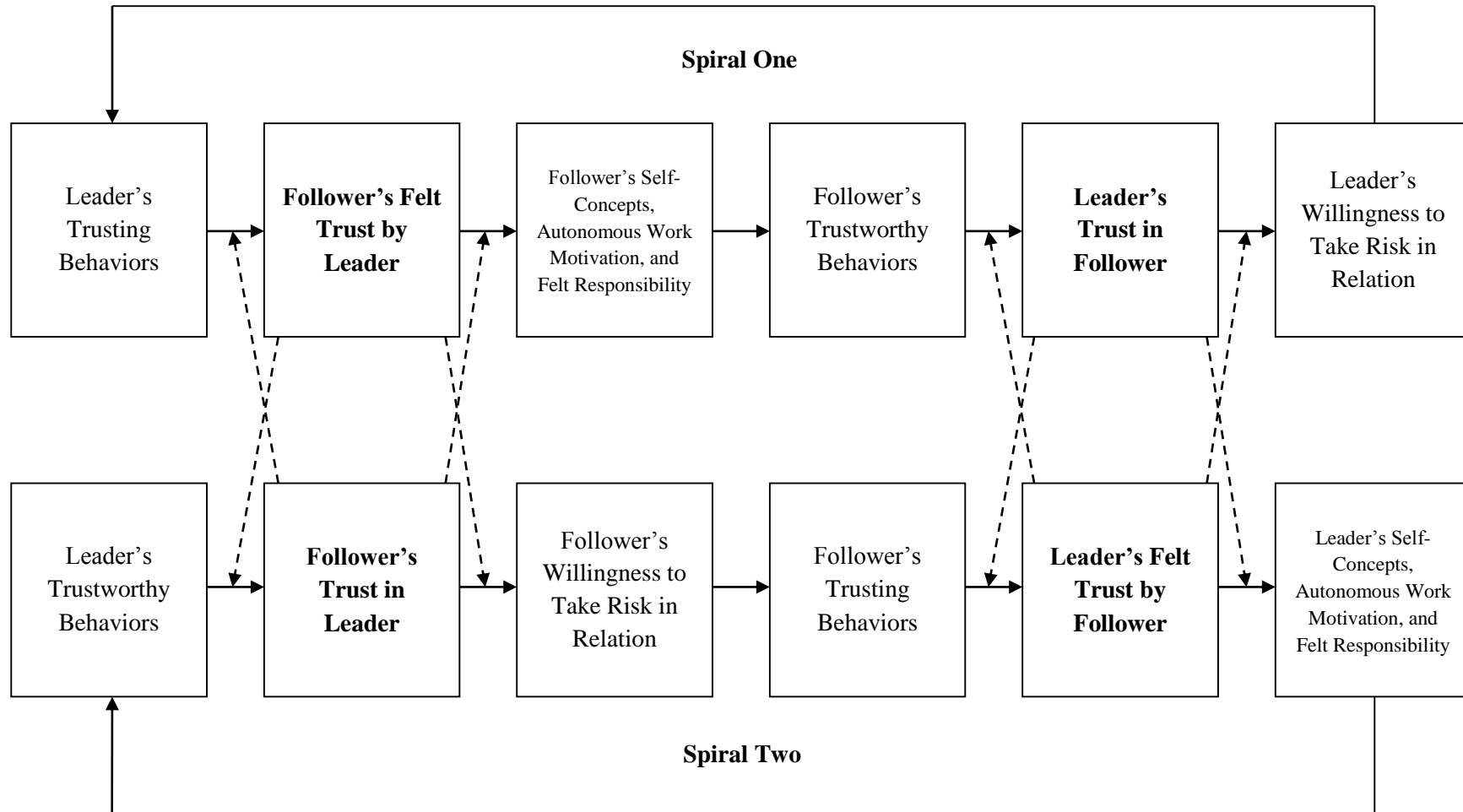
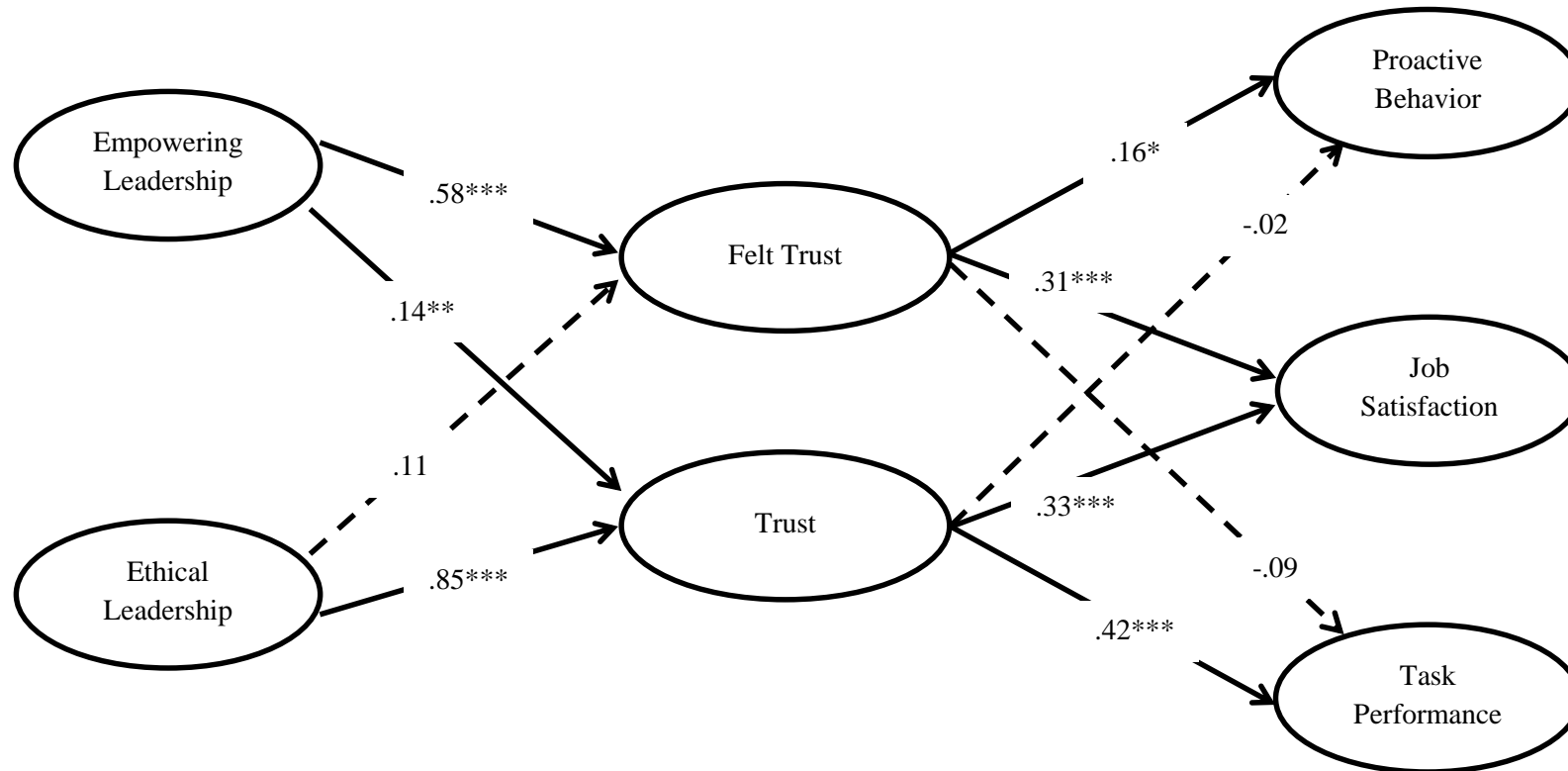


FIGURE 2
Nomological Validity^{a, b}



^a Model fit index: $\chi^2 = 2504.43$, $df = 1254$, $p < .001$, CFI = .91, TLI = .90, RMSEA = .05, SRMR = .06

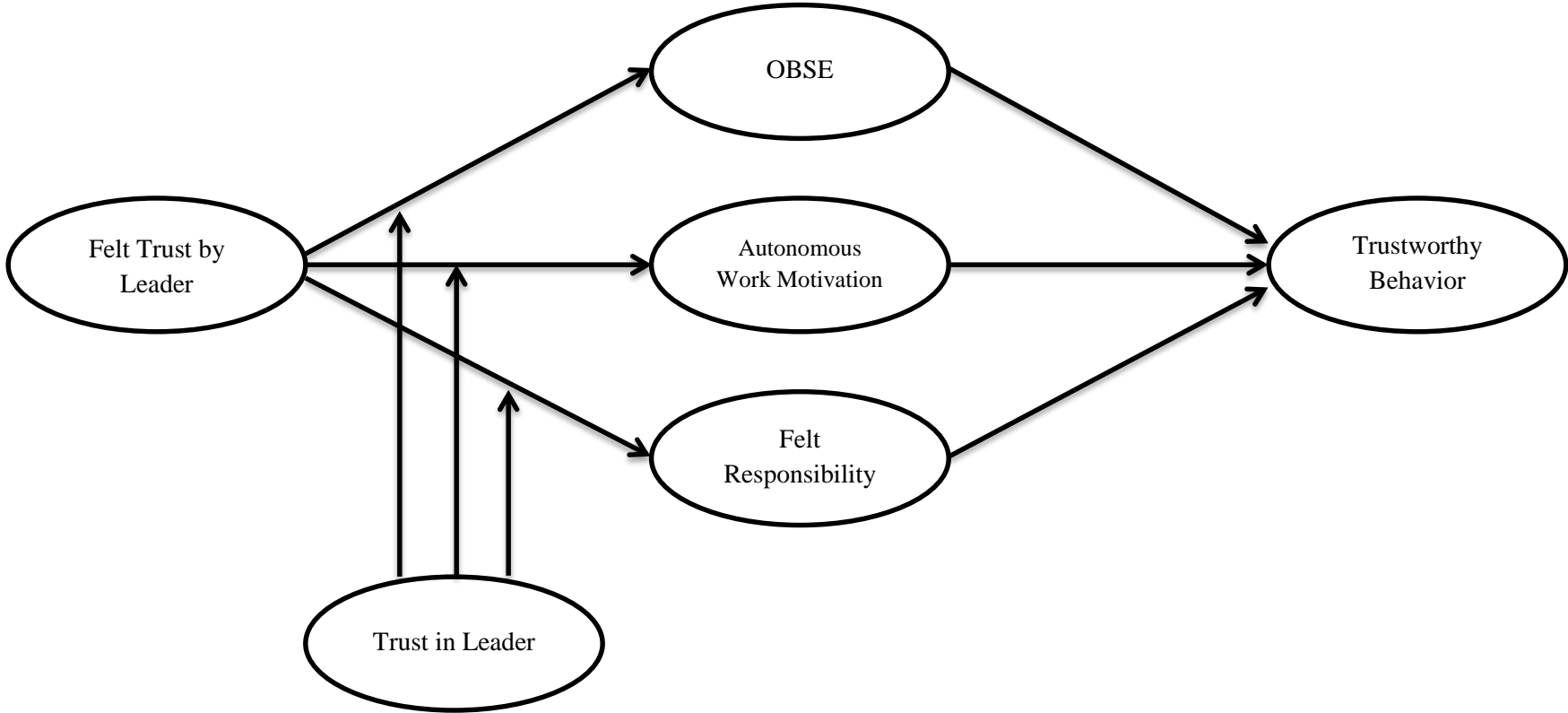
^b Standardized path coefficients are reported here.

* $p < .05$; ** $p < .01$; *** $p < .001$

FIGURE 3

Theoretical Model

The Impact of Felt Trust on Trustworthy Behaviors



APPENDIX 1

Measures Used in Essay 2 (CFA Study)

Behavioral integrity

(Simons, Friedman, Liu, & Parks, 2007)

1. There is a match between my manager's words and actions.
2. My manager delivers on promises.
3. My manager practices what he/she preaches.
4. My manager does what he/she says he/she will do.
5. My manager conducts himself/herself by the same values he/she talks about.
6. My manager shows the same priorities that he/she describes.
7. When my manager promises something, I can be certain that it will happen.
8. If my manager says he/she is going to do something, he/she will.

LMX

(Graen & Uhl-Bien, 1995)

1. I usually know where I stand with my supervisor.
2. My supervisor understands my problems and needs.
3. Regardless of how much power he/she has built into his/her position, my supervisor would be personally inclined to use his/her power to help me solve problems in my work.
4. My supervisor recognizes my potential.
5. I can count on my supervisor to "bail me out," even at his or her own expense, when I really need it.
6. I have enough confidence in my leader that I would defend and justify his/ her decision if he/she were not present to do so.
7. I would characterize the working relationship I have with my manager as extremely effective.

Psychological Empowerment

(Spreitzer, 1995)

1. The work I do is very important to me (meaning 1).
2. My job activities are personally meaningful to me (meaning 2).
3. The work I do is meaningful to me (meaning 3).

4. I am confident about my ability to do my job (competence 1).
5. I am self-assured about my capabilities to perform my work activities (competence 2).
6. I have mastered the skills necessary for my job (competence 3).

7. I have significant autonomy in determining how I do my job (self-determination 1).
8. I can decide on my own how to go about doing my work (self-determination 2).
9. I have considerable opportunity for independence and freedom in how I do my job (self-determination 3).

10. My impact on what happens in my department is large (impact 1).
11. I have a great deal of control over what happens in my department (impact 2).
12. I have significant influence over what happens in my department (impact 3).

Measures Used in Essay 2 (Nomological Validity Study)

Ethical Leadership

(Brown, Treviño, & Harrison, 2005)

1. Listens to what employees have to say
2. Disciplines employees who violate ethical standards
3. Conducts his/her personal life in an ethical manner
4. Has the best interests of employees in mind
5. Makes fair and balanced decisions
6. Can be trusted
7. Discusses business ethics or values with employees
8. Sets an example of how to do things the right way
9. Defines success not just by results but also the way
10. When making decisions, asks “what is the right thing to do?” that they are obtained in terms of ethics

Empowering Leadership

(Zhang & Bartol, 2010)

1. My manager helps me understand how my objectives and goals relate to that of the company.
2. My manager helps me understand the importance of my work to the overall effectiveness of the company.
3. My manager helps me understand how my job fits into the bigger picture.
4. My manager makes many decisions together with me.
5. My manager often consults me on strategic decisions.
6. My manager solicits my opinion on decisions that may affect me.
7. My manager believes that I can handle demanding tasks.
8. My manager believes in my ability to improve even when I make mistakes.
9. My manager expresses confidence in my ability to perform at a high level.
10. My manager allows me to do my job my way.
11. My manager makes it more efficient for me to do my job by keeping the rules and regulations simple.
12. My manager allows me to make important decisions quickly to satisfy customer needs.

Task Performance

(Williams & Anderson, 1991)

1. This person fulfills the responsibilities specified in his/her job description.
2. This person performs the tasks that are expected as part of the job.
3. This person meets performance expectations.
4. This person adequately completes responsibilities.

Proactive Behavior

(Griffin, Neal, & Parker, 2007)

1. Initiated better ways of doing his/her core tasks.
2. Come up with ideas to improve the way in which his/her core tasks are done.
3. Made changes to the way his/her core tasks are done.

4. Suggested ways to make his/her work unit more effective.
5. Developed new and improved methods to help his/her work unit perform better.
6. Improved the way his/her work unit does things.

7. Made suggestions to improve the overall effectiveness of the organization (e.g., by suggesting changes to administrative procedures).
8. Involved himself/herself in changes that are helping to improve the overall effectiveness of the organization.
9. Come up with ways of increasing efficiency within the organization

Job Satisfaction

(Chen, Ployhart, Thomas, Anderson, & Bliese, 2011)

1. I am very satisfied with my job in this company.
2. I like my job in this company.
3. I am satisfied with the kind of work I do on my job.

Measures Used in Essay 3

Organization-based Self-Esteem

(Pierce et al., 1989)

1. I count around here.
2. I am taken seriously.
3. I am important.
4. I am trusted.
5. There is faith in me.
6. I can make a difference.
7. I am valuable.
8. I am helpful.
9. I am efficient.
10. I am cooperative.

Autonomous Work Motivation

I used a goal-based measure of autonomous work motivation developed by Sheldon and Elliot (1998) and validated by Bono and Judge (2003) and by Judge, Bono, Erez, and Locke (2005). Followers were asked to identify four job-related goals that could be accomplished in 60 days. After participants identified goals, I asked for their reasons for pursuing each goal.

The questions are:

1. You choose this goal because somebody else wants you to or because the situation demands it. (External)
2. You pursue this goal because you would feel anxious, guilty, or ashamed if you didn't. (Introjected)
3. You pursue this goal because you really believe it's an important goal to have. (Identified)
4. You pursue this goal because of the fun and enjoyment it provides you. (Intrinsic)

Participants answered all four questions for each of their four goals using a 7-point scale (1 “not at all for this reason,” to 7, “completely for this reason”). Responses were averaged across the four goals to form a single score for external, introjected, identified, and intrinsic motivation. I followed steps used by Sheldon and Elliot (1998) to form an autonomous work motivation composite, adding together the intrinsic and identified scales and subtracting the external and introjected scales.

Felt Responsibility for Conscientious Behavior

Item 1, 2, 5, and 6 were adopted from Farh, Earley, and Lin's (1997) study, and item 3 and 4 were adopted from Podsakoff, MacKenzie, Moorman, and Fetter's (1990) study.

1. Takes one's job seriously and rarely makes mistakes.
2. Complies with company rules and procedures even when nobody watches and no evidence can be traced.
3. Try to be one of the most conscientious employees in my department.
4. Does not take extra breaks.
5. Does not mind taking on new or challenging assignments.
6. Tries hard to self-study to increase the quality of work outputs.

Felt Responsibility for Taking Charge

(Morrison & Phelps, 1999)

1. Often tries to change how his or her job is executed in order to be more effective.
2. Often tries to bring about improved procedures for the work unit or department.
3. Often tries to institute new work methods that are more effective for the company.
4. Often tries to correct a faulty procedure or practice.
5. Often tries to implement solutions to pressing organizational problems.
6. Often tries to introduce new structures, technologies, or approaches to improve efficiency.

Felt Responsibility for Helping

(Podsakoff, MacKenzie, Moorman, & Fetter, 1990)

1. Helps others who have been absent.
2. Helps orient new people even though it is not required.
3. Helps others who have heavy loads.
4. Helps others who have work-related problems.
5. Is always ready to lend a helping hand to those around him/her.

Felt Responsibility for Prohibitive Voice

(Liang, Farh, & Farh, 2012)

1. Advise other colleagues against undesirable behaviors that would hamper job performance.
2. Speak up honestly with problems that might cause serious loss to the work unit, even when/though dissenting opinions exist.
3. Dare to voice out opinions on things that might affect efficiency in the work unit, even if that would embarrass others.
4. Proactively report coordination problems in the workplace to the management.
5. Dare to point out problems when they appear in the unit, even if that would hamper relationships with other colleagues.

Felt Responsibility for Promotive Voice

(Liang, Farh, & Farh, 2012)

1. Proactively develop and make suggestions for issues that may influence the unit.
2. Proactively voice out constructive suggestions that help the unit reach its goals.
3. Proactively suggest new projects which are beneficial to the work unit.
4. Raise suggestions to improve the unit's working procedure.
5. Make constructive suggestions to improve the unit's operation.

Conscientious Behavior

Item 1, 2, 5, and 6 were adopted from Farh, Earley, and Lin's (1997) study, and item 3 and 4 were adopted from Podsakoff, MacKenzie, Moorman, and Fetter's (1990) study.

1. Takes one's job seriously and rarely makes mistakes.
2. Complies with company rules and procedures even when nobody watches and no evidence can be traced.
3. Try to be one of the most conscientious employees in my department.
4. Does not take extra breaks.
5. Does not mind taking on new or challenging assignments.
6. Tries hard to self-study to increase the quality of work outputs.

Taking Charge

(Morrison & Phepls, 1999)

1. This person often tries to change how his or her job is executed in order to be more effective.
2. This person often tries to bring about improved procedures for the work unit or department.
3. This person often tries to institute new work methods that are more effective for the company.
4. This person often tries to correct a faulty procedure or practice.
5. This person often tries to implement solutions to pressing organizational problems.
6. This person often tries to introduce new structures, technologies, or approaches to improve efficiency.

Helping Behavior

(Podsakoff, MacKenzie, Moorman, & Fetter, 1990)

1. This person helps others who have been absent.
2. This person helps orient new people even though it is not required.
3. This person helps others who have heavy loads.
4. This person helps others who have work-related problems.
5. This person is always ready to lend a helping hand to those around him/her.

Prohibitive Voice

(Liang, Farh, & Farh, 2012)

1. Advise other colleagues against undesirable behaviors that would hamper job performance.
2. Speak up honestly with problems that might cause serious loss to the work unit, even when/though dissenting opinions exist.
3. Dare to voice out opinions on things that might affect efficiency in the work unit, even if that would embarrass others.
4. Proactively report coordination problems in the workplace to the management.
5. Dare to point out problems when they appear in the unit, even if that would hamper relationships with other colleagues.

Promotive Voice

(Liang, Farh, & Farh, 2012)

1. Proactively develop and make suggestions for issues that may influence the unit.
2. Proactively voice out constructive suggestions that help the unit reach its goals.
3. Proactively suggest new projects which are beneficial to the work unit.
4. Raise suggestions to improve the unit's working procedure.
5. Make constructive suggestions to improve the unit's operation.

APPENDIX 2

Chinese Version of Trust and Felt Trust Scales

Felt Trust Scale

1. 领导让我参与部门重要的决策工作。
2. 有晋升机会时，领导优先推荐我。
3. 当我与其他同事意见相左时，领导支持我的意见。
4. 领导带我去认识他的同行业朋友。
5. 领导跟我倾诉他的个人感受和想法。
6. 领导邀请我参加他的私人聚会。
7. 领导在休假或出差期间授权我主持工作。

Trust Scale

1. 我相信领导能信守诺言。
2. 我相信领导不会给我“穿小鞋”，即使他有这样的机会。
3. 在工作中，领导以身作则，为下属做出表率。
4. 我的领导非常可靠，在那些对我很重要的事情上尤其如此。
5. 我相信领导跟我会说真话。
6. 我相信领导能明辨是非，不会轻信关于我的负面消息。
7. 我相信，当工作中遇到巨大困难时，领导能够带领大家克服困难取得成功。