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The nature of trust: conceptual and operational clarification

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THE NATURE OF TRUST:
CONCEPTUAL AND OPERATIONAL CLARIFICATION

A Dissertation

Submitted to the Graduate Faculty of
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Psychology

by
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ABSTRACT

The importance of trust in working relationships is widely acknowledged among organizational researchers and practitioners. Unfortunately, trust is defined and measured differently across studies, making it difficult to integrate and compare research findings. Therefore, the purpose of this paper was to clarify the nature of trust as it exists across research and organizational settings. First, trust was conceptualized in terms of 10 defining characteristics based on a convergence and reconciliation of inconsistencies among existing definitions. These 10 characteristics of trust were incorporated into a single definition of trust to offer a more comprehensive description of the construct. Second, the Functional Trust Scale (FTS) was constructed to operationalize trust in terms of its 10 defining characteristics to provide a more complete and representative measure of trust that can be applied to a variety of situations. Third, empirical and statistical methods were employed to assess the structure and psychometric properties of the FTS. The results of this study provide initial evidence supporting the FTS and its underlying concept of trust. First, the hypothesized FTS measurement model resulted as the best fitting model among alternate models within two samples. Second, the FTS resulted in conceptual similarity across two applications, suggesting that it is applicable across multiple situations. Third, the internal consistency of the FTS and its sub-scales suggest that it is a reliable measure. Finally, the results provide initial support for the content, face, convergent, and divergent validity of the FTS.

THE NEED FOR CLARIFICATION OF TRUST

Organizations increasingly are recognizing the importance of trust in the workplace.

Trust is considered a fundamental ingredient for motivating productive working relationships and driving a competitive business advantage (Braddock & Eccles, 1989; Creed & Miles, 1996; Ring & Van de Ven, 1994; Wicks, Berman, & Jones, 1999). For example, research suggests that trust facilitates strategic collaboration and cooperation (Dodgson, 1993; Zucker, Darby, Brewer, & Peng, 1996), citizenship behavior (Deluga, 1995; Konovsky & Pugh, 1994; McAllister, 1995), and conflict resolution (Parks, Henager, & Scamahorn, 1996). Trust also is related to employee attitudes such as job satisfaction (Andeleeb, 1996; Rich, 1997) and organizational commitment (Yamagishi, Cook, & Watabe, 1998) as well as criterion measures such as justice perceptions (Brockner, Siegel, Daly, Tyler, & Martin, 1997) and customer satisfaction (Chow & Holden, 1997; Swan, Bowers, & Richardson, 1999).

Although these findings point to the instrumental role trust plays in the workplace, the literature is unclear about what trust is. Individual studies often define and measure trust differently (Hosmer, 1995; Rousseau, Sitkin, Burt, & Camerer, 1998), and no one approach currently exists to sufficiently account for all aspects of this complex construct (Bigley & Pearce, 1998). The inconsistent, and generally deficient, manner in which trust currently is defined and measured seriously hinders attempts to integrate research findings and understand the impact of trust on organizational variables. Therefore, the purpose of this paper is to consider the fundamental aspects of trust in an effort to clarify the nature of this construct. New conceptual and operational definitions of trust are presented to offer a comprehensive understanding of its nature and a basis for integrating approaches to studying trust across theoretical perspectives, research agendas, and organizational settings.

In the following sections, the meaning and measurement of trust is discussed in depth. First, trust is conceptualized as a multifaceted construct in terms of the basic characteristics that are considered necessary to adequately define it. Second, trust is operationalized in terms of the Functional Trust Scale (FTS), which was designed rationally based on the 10 defining characteristics of trust in an attempt to account for all necessary aspects of the construct and to accommodate various lines of trust research. Fourth, empirical methods were conducted to examine the psychometric properties of the FTS in terms of its structure, applicability, reliability, and validity. Finally, the implications of the FTS and its underlying concept are discussed based on the findings of this initial study and the potential directions for future research.

CONCEPTUAL TRUST: THE DEFINING CHARACTERISTICS

Despite the ease with which we refer to trust in everyday conversations, no generally accepted definition of the construct currently exists among researchers. Rather, the term “trust” is used to refer to different things by different researchers, resulting in an assortment of definitions that have accumulated in the literature that suit specific situations and research agendas (for comprehensive reviews see Bigley & Pearce, 1998; Hosmer, 1995; Rousseau et al., 1998). Although existing trust definitions often overlap on various aspects of the construct (Hosmer; Rousseau et al.), none contain the information needed to define trust across situations (Bigley & Pearce). This lack of a unified and complete definition of trust generates confusion about what it means when someone says, “I trust my co-worker.” Given the definitions that are presented in research, the interpretation of “trust” could vary widely based on which aspect of this complex construct one chooses to emphasize (Bigley & Pearce).

Therefore, the purpose of this section is to conceptualize trust in a way that meaningfully incorporates the various aspects of the construct into a comprehensive definition. To do so, the concept of trust is first broken down into the fundamental aspects of its nature. Specifically, trust is conceptualized in terms of the defining characteristics of the construct. The following sections identify 10 characteristics of trust based on a convergence and reconciliation of concepts that are frequently, but sporadically, represented in existing trust definitions. Table 1 presents these 10 defining characteristics of trust. Although interrelated, each characteristic reflects a specific aspect of trust that is necessary, but not individually sufficient, to define it. Taken together, these 10 characteristics provide a comprehensive definition of trust. Each characteristic of trust is discussed separately below, and the 10 characteristics are integrated into a single, multifaceted definition of trust.

Table 1
The Defining Characteristics of Trust

THE DEFINING CHARACTERISTICS OF TRUST		
Referents of Trust	Attitudinal Social Versatile Functional	defines the phenomena to which “trust” refers.
Components of Trust	Hypothetical Consequential Motivational	defines the sentiments that “trust” contains.
Dimensions of Trust	Symmetrical Incremental Conditional	defines the judgments that levels of “trust” infer.

The Referents of Trust

Confusion about the meaning of trust begins with conflicting assumptions among existing definitions about what type of construct trust is and to how it is experienced. For example, some theories refer to trust as a behavioral construct while others refer to it as an attitude. In addition, researchers often confuse trust with concepts such as credibility (e.g., Butler, 1991), loyalty (e.g., Rich, 1997), risk (e.g., Sheppard & Sherman, 1998), confidence (McAllister, 1995), and cooperation (e.g., Burt & Knez, 1996). As a result, the term “trust” often is applied inconsistently and inappropriately in reference to various concepts, making it difficult for researchers to decide what trust is and when it occurs (Clark & Payne, 1997). The first four characteristics define the underlying assumptions about what trust is (and is not) in terms of the basic concepts to which “trust” refers.

Trust is Attitudinal

The first issue to clarify is whether trust refers to a behavioral or psychological event. Research based on early sociological theories (Deutsch, 1958) conceptualizes trust as a behavior. For example, Currall and Judge (1995) define trust as “...one individual’s behavioral reliance on another...” (p. 153). This perspective assumes that trust is equated with overt actions such as

cooperation (e.g., Burt & Knez, 1996) or risk-taking (e.g., Sheppard & Sherman, 1998). However, defining trust as a behavioral construct is criticized because trust can occur in the absence of observable behavior, and such behavior can occur in the absence of trust (Gambetta, 1988; Luhmann, 1988). For example, an individual might cooperate with a co-worker, but such behavior does not necessarily constitute an instance of trust. Such behavior could reflect a situation of coercion or compliance with established rules and norms. Likewise, individuals might claim to trust their co-workers but might never actually show it behaviorally, perhaps because they find no real opportunity to do so. Because trust is not necessarily defined by overt action, it is inappropriate to define it as a behavioral construct (Mayer, Davis, & Schoorman, 1995). Rather, research indicates that instances of cooperation or reliance, such as task delegation (Schoorman, Mayer, & Davis, 1996) and collaboration (Powell, 1996), are potential outcomes of trust. As such, trust is conceptually distinct from the behaviors that may or may not reflect it (Mayer et al., 1995).

Trust more commonly and appropriately is defined as an attitude (Jones & George, 1998; Rousseau et al., 1998). Specifically, trust is a subjective phenomenon that is defined by the psychological experiences of the individual who bestows it (Kee & Knox, 1970). Research indicates that individuals characterize the experience of trust in terms of their thoughts, feelings, and behavioral intentions (Clark & Payne, 1997; Cummings & Bromiley, 1996). For example, an individual might say “I think and I feel that I trust my co-worker, and I would behave accordingly.” Because each of these sentiments contributes to the experience of trust, the construct appropriately is defined by all three components of the attitude (McKnight, Cummings, & Chervany, 1998; Whitner, Brodt, Korsgaard, & Werner, 1998). As such, “trust” refers to a psychological experience that consists of cognitive, affective, and behavioral sentiments.

Trust is Social

Having defined trust as an attitude, the second referent of trust clarifies what this attitude is about (i.e., the object of trust). In general, the object of an attitude is a social factor that the attitude evaluates (Anderson, 1992). As one's party's attitude toward another party in a given situation (Mayer et al., 1995), trust is embedded within a complex social system. That is, this attitude exists within a source, the *trustor*, is directed toward a recipient, the *target*, and occurs within a setting, the *context* (Clark & Payne, 1997). The object of trust, however, is unclear given inconsistencies among existing definitions regarding which of these three social factors is the object of trust.

Existing definitions of trust often identify the trustor, target, or context as the object of the attitude, thus suggesting that trust is about only one of its social elements. For example, trust has been defined as an evaluation of a trustor's values (e.g., Jones & George, 1998), a target's attributes (e.g., Butler, 1991), or a context's structure (e.g., Sheppard & Sherman, 1998). However, research indicates that perceptions of various trustor, target, or contextual factors are potential antecedents to trust and not the attitude itself (Currall & Judge, 1995; Mayer & Davis, 1999). As such, defining trust in terms of such antecedents can misrepresent the nature of the attitude (Kee & Knox, 1970; Mayer et al., 1995). For example, a trustor might say, "My co-worker is competent," but that does not necessarily mean that the co-worker is trusted. Rather, the trustor might *not* trust the co-worker *because* the co-worker is competent. The same case can be made about a trustor's perceptions of oneself or the context in which the attitude occurs. Although evaluations of trustor, target, or context might say something about why one trusts, they do not necessarily define what trust is. If trust is not defined by evaluations of trustor,

target, or contextual characteristics, then neither of these social factors is the appropriate object of the attitude.

Instead of regarding the trustor, target, and/or context as the object of trust, research indicates that the significance of these factors is how they are perceived to influence one's outcomes and interests in a given situation (Butler & Cantrell, 1984; Kramer, 1996; Scott 1980). These findings suggest that trust is an evaluation of the effect of such factors, as opposed to the factors themselves. Because the attitude focuses on the outcome of interacting with another in a given situation, perceptions of the impact of such interaction (i.e., social influence) is a more appropriate object of trust than perceptions of the individual factors that contribute to such influence (Taylor, 1990; Zucker et al., 1998). As such, trust is about how one's interests are influenced when a trustor, target, and context interact (Bhattacharya, Devinney, & Pillutla, 1998; Robinson, 1996). For example, the statement "I trust my co-worker" may be equated (albeit generically) with "I perceive that interacting in a certain manner with my co-worker positively influences my outcomes in this situation." Extending the interpretation to include "because I perceive my co-worker to be honest, loyal, ..." only indicates *why* one trusts, but not what trust is. Rather, trust is social in nature in that it is an assessment of the influence that interaction among a trustor, target, and context might have over one's outcomes -- not an assessment of the individual factors that contribute to such influence.

Trust is Versatile

As an assessment of social influence, trust occurs in a variety of situations in which a trustor, target, and context might interact. Specifically, levels of trust can vary across trustors (Rotter, 1967, 1980), targets (Johnson-George & Swap, 1982), and/or contexts (Scott, 1980). The conceptual basis for explaining these differences, however, is a major source of

inconsistency in the literature. Some theories refer to trust as a single construct that applies consistently across situations, while others refer to trust differently based on the type of situation in which it exists. For example, is trust for a family member a different construct than trust for a co-worker? Or, is a manager's trust a different construct than a subordinate's trust? To answer these questions, it is necessary to consider the nature of trust in terms of why it might vary from situation to situation.

Because levels of trust differ across situations, several theories use the term "trust" to refer broadly to different, albeit related, constructs. Such theories identify and define different types of trust to correspond with different types of situations (e.g., Couch, Adams, & Jones, 1996; Creed & Miles, 1996; Sheppard & Sherman, 1998). For example, McAllister (1995) defines two distinct types of trust: cognition-based trust that occurs in formal, task-related situations, and affect-based trust that occurs in informal, interpersonal situations. Similarly, Lewicki and Bunker (1995) identify three types of trust (i.e., calculus-based, knowledge-based, and identification-based), each of which is conceptually distinct and corresponds to a different stage of the trustor-target relationship. Although these theories differ on the basis with which they distinguish different types of trust, they all conceptualize trust as a reflection of the situation in which it occurs. Such theories assume that the meaning of trust is based on the dynamics of the situation at hand. However, research indicates that situational factors (e.g., relationship longevity, contextual demands) are antecedents to trust (Burt & Knez, 1996; Currall & Judge, 1995). These findings suggest that situational factors affect the extent to which trust is experienced, not the actual attitude being experienced. By defining different types of trust for different types of situations, the meaning of trust is inappropriately contingent upon extraneous factors that only describe the conditions under which trust is experienced, as opposed to

describing the experience itself. Therefore, it is conceptually inappropriate to assume that trust is a reflection of the situation in which it occurs.

A more appropriate approach is to exclude extraneous factors from the definition of trust and to account for variations in the attitude across situations in terms of the nature of the attitude itself, free from contextual limits (Jones & George, 1998; Kee & Knox, 1970). Specifically, trust is considered a single construct that is versatile in nature in that trustors adjust their assessment of influence according to the perceived dynamics of a given situation (Mayer et al., 1995; Wicks et al., 1999; Zucker et al., 1998). As such, trust is a reaction to the dynamics of the situation in which it occurs, not a direct reflection of them (Bhattacharya et al., 1998; Hwang & Burgers, 1997). Although trust might develop automatically (Rotter, 1967, 1980) or calculatively (Tyler & DeGoey, 1996), a trustor's assessment of influence adapts (in degree, not meaning) in response to altered perceptions of influence and of the situation in which it might occur (Gambetta, 1988; Johnson-George & Swap, 1982; Meyerson, Weick, & Kramer, 1996). The versatile nature of trust is such that although a trustor's assessment of influence might vary from situation to situation, the construct itself remains conceptually stable. Defining trust as a versatile attitude allows researchers to examine and account for variations in levels of trust across situations without defining trust differently across situations.

Trust is Functional

The fourth referent of trust pertains to the general purpose of a trustor's attitude. Trust is functional in that the attitude represents a trustor's attempt to attain a sense of control in a situation in which it might not otherwise exist. That is, trust occurs when a trustor considers how to interact with another party in a situation that offers limited external cues for appropriate interaction choices (Burt & Knez, 1996; Jones & George, 1998; Robinson, 1996), and/or when

there are indeterminate outcomes for any given interaction option (Gambetta, 1988; Lewicki, McAllister, & Bies, 1998). To deal with such situational ambiguity, trustors rely on their personal assessments of influence as an internal guide to making decisions about if, and how, to interact with another party (Ring & Van de Ven, 1994). As such, a trustor's attitude serves as an informal criterion for functional interaction decisions.

Although a trustor's attitude is functional in nature, it is inappropriate to impose definitively (as some theories tend to do) that trust is necessarily a productive, desired state and that the lack of trust (or distrust) is necessarily a counterproductive, destructive state (Jones & George, 1998; Taylor, 1990). Because trust is a subjective experience, it is appropriately defined from the perspective of its source (Kee & Knox, 1970). As such, the attitude always is intended to serve the trustor's own best interests. Specifically, trust refers to a functional assessment of social influence that reflects a trustor's best estimate for making interaction decisions that promote desirable outcomes (Ring & Van de Ven, 1994; Wicks et al., 1999). For example, when an individual trusts a co-worker, the trustor's favorable assessment of that co-worker's influence aides the trustor's decision to interact with the co-worker in a way that is perceived to promote a desired outcome in a given situation (i.e., attain something good from influence). Similarly, when an individual does not trust a co-worker, the unfavorable assessment of influence still aides a trustor's decisions about interacting with the co-worker toward a desired outcome (i.e., avoid something bad from influence). As such, trust is functional in that the attitude, at any level, is necessarily productive when considered from the trustor's perspective.

As a functional assessment of influence, the purpose of a trustor's attitude centers on the notion of control, in which control refers to the perceived ability to manage one's outcomes and protect one's interests (Zand, 1972). As such, control is regarded here a perception, a belief --

not an action. Although the conceptual link between trust and control is widely accepted throughout the literature, the nature of this relationship often is misrepresented. Frequently, existing definitions mistakenly infer a linear relationship between trust and control, such that trust is defined by the amount of control one perceives in a given situation (e.g., Das & Teng, 1998; Hwang & Burgers, 1997; Powell, 1996). However, a linear trust-control relationship fails to account for the functional nature of trust in all instances of the attitude. To illustrate, definitions that infer a linear trust-control relationship are examined below.

One way trust has been defined is in terms of an assumed positive linear relationship with control, such that trust represents a perception of heightened control, whereas the lack of trust represents a reduction in perceived control (e.g., Boone & Holmes, 1991; Hwang & Burgers, 1997; Webb, 1996). Control in such definitions often is discussed in terms of a trustor's level of confidence in another's intentions and actions in a given situation (e.g., McAllister, 1995; Lewicki et al., 1998). This view assumes that individuals who trust their co-workers (i.e., high confidence in influence) perceive greater personal control in a given situation than do those who do not trust their co-workers (i.e., low confidence in influence). That is, if an individual trusts a co-worker, it is presumed that the individual has enough confidence in the co-worker's influence to attain a sense of control in a given situation. Conversely, if an individual does not trust a co-worker, it is assumed that the lack of confidence in influence decreases the individual's perception of control. When viewed from the trustor's perspective, however, it is illogical to assume that individuals who do not trust their co-workers (i.e., low confidence) perceive this unfavorable assessment of influence as dysfunctional in a given situation (i.e., reduced control). Rather, it is more logical to assume that individuals who do not trust their co-workers attain a sense of control by having low confidence in the co-worker's influence. Kee and Knox (1970)

refer to the lack of trust as suspicion, in which even a suspicious attitude is functional because by virtue of having the attitude, one feels better prepared to potentially manage one's outcomes and protect one's interests (i.e., sense of control). Therefore, defining trust in terms of a trustor's level of confidence in influence assumes a positive trust-control relationship, which inappropriately limits the functional nature of trust to cases in which there is only high trust. However, the functional nature of trust is such that even a lack of trust provides a sense of control over the outcomes of ambiguous situations.

Definitions that infer a negative relationship between trust and control also limit the functional nature of trust. Such definitions suggest that trust refers to a voluntary reduction of perceived control, and the lack of trust is an effort to increase one's sense of control in ambiguous situations (e.g., Das & Teng, 1998; Luhmann, 1988; Meyerson et al., 1996; Sheppard & Sherman, 1998). For example, definitions based on this approach often refer to trust as a willingness to be vulnerable to another's influence in a given situation (Doney, Cannon, & Mullen, 1998; Mayer et al., 1995; Mishra, 1996). Based on this view, trusting one's co-worker necessarily decreases one's perceived control to the extent that one is willing to submit to the co-worker's discretionary actions that impact on one's outcomes (Kipnis, 1996; Rousseau et al., 1998). However, this view assumes that an individual only maintains a sense of control with a lack of trust (i.e., low willingness to be vulnerable). That is, a presumed negative relationship between trust and control suggests that when trusting another, a trustor willingly forsakes a sense of control over one's own outcomes in favor of being vulnerable to another's impact on the outcomes of a given situation. This assumption fails to consider the possibility that a trustor might be willing to be vulnerable to a co-worker in a given situation because the trustor attains a sense of control from depending upon the co-worker to bring about positive outcomes. For

example, an individual who trusts a co-worker might believe that depending on another's discretionary influence (i.e., vulnerability) is the best way to protect one's interests in a given situation (i.e., control). In such a case, vulnerability would maximize one's perceived control rather than threaten it. As such, defining trust in terms of one's willingness to be vulnerability assumes a negative relationship between trust and control, which limits the functional nature of trust to only cases involving a lack of trust. The functional nature of trust, however, is such that both a willingness and an unwillingness to be vulnerable to influence provide a sense of control in an ambiguous situation when considered from the trustor's perspective.

Because both the positive and negative views of the trust-control relationship fail to consider trust from the trustor's perspective, it is inappropriate to define trust in terms of a linear relationship to control. That is, trust does not necessarily refer to the amount of control the trustor perceives in a given situation. Rather, research indicates that both trust and the lack of trust are associated with an increased sense of personal control over the outcomes of a given situation (Sorrentino, Holmes, Hanna, & Sharp, 1995). These findings suggest that both trust and a lack of trust establish the perceived control that a trustor needs to deal with ambiguous situations. In this way, a trustor's attitude is a mechanism for control over one's own outcomes and interests through an assessment of influence that promotes productive interaction decisions (Braddach & Eccles, 1989; Creed & Miles, 1996). When considered from the trustor's perspective, trust (regardless of its level) reflects one's best estimate of influence in an otherwise ambiguous situation, which is intended to protect one's own interests and facilitate desirable outcomes (i.e., attain good and/or avoid bad). As such, "trust" refers to a functional assessment of influence that maximizes one's perceived control in an otherwise ambiguous situation. The manner in which trust is manifested also is functional, such that trusting behaviors are attempts

to attain desirable outcomes by protecting one’s interests through actions that either increase or decrease influence in accordance with one’s assessment of such influence.

Summary of Trust’s Referents

Table 2 summarizes the referent characteristics of trust. Specifically, trust refers to an attitude that consists of thoughts, feelings, and behavioral intentions (i.e., attitudinal). This attitude represents an assessment of the perceived influence that interaction among a trustor, target, and context has on the outcomes of a given situation (i.e., social), which may have different levels in different situations (i.e., versatile). At any level, an assessment of influence provides a sense of control in ambiguous situations (i.e., functional). Taken together, these four characteristics define the type of construct trust is (and is not).

Table 2
Summary of the Referents of Trust

SUMMARY OF THE REFERENTS OF TRUST		
	Trust is . . .	Trust is NOT . . .
Attitudinal	a psychological experience consisting of thoughts, feelings, and behavioral intentions.	overt behavior, such as cooperation or risk-taking.
Social	about the perceived influence of social interaction on one’s outcomes.	About specific source, target, or contextual characteristics.
Versatile	a single construct that varies in level across situations.	Multiple constructs that vary in meaning across situations.
Functional	an assessment of influence that provides a sense of control to make productive interaction decisions.	how much (or how little) control one desires or perceives in a given situation.

The Components of Trust

To this point, trust has been defined broadly as an attitude that represents one’s functional assessment of influence in a given situation. To fully understand the nature of this attitude, however, it is necessary to define its components. Recall that a trustor’s attitude consists of one’s thoughts, feelings, and behavioral intentions (Clark & Payne, 1997; Cummings & Bromiley, 1996). Unfortunately, existing definitions disagree on which of these components

defines trust (e.g., Boone & Holmes, 1991; Currall & Judge, 1995; Luhmann, 1988; Sheppard & Sherman, 1998). However, the three components of trust reflect different sentiments about influence, so no one component sufficiently defines the attitude (McKnight et al., 1998).

Therefore, it is necessary to specify the sentiment expressed by each component of a trustor's attitude to accurately interpret what it means when someone says, "I trust my co-worker."

Although interrelated, the three components of trust differ in how they contribute to a trustor's perceived control in a given situation. That is, a trustor's thoughts, feelings, and behavioral intentions reflect hypothetical, consequential, and motivational sources of control, respectively.

Trust is Hypothetical

The first component of trust is one's cognitive evaluation of influence in a given situation. This component is hypothetical in nature given that it provides control through speculation. Although a trustor's attitude may be based on perceptions of past influence and/or present circumstances, trust is separate from the perceptions that affect it (Kee & Knox, 1970; Mayer et al., 1995). Rather, trust is future-oriented; it is about influence that has yet to occur. Because a trustor's assessment of influence is constrained by ambiguity about future events and their outcomes, a trustor can only speculate about influence and estimate its impact on the outcomes of a given situation (Bhattacharya et al., 1998; Gambetta, 1988). As such, trust is hypothetical in nature, such that a trustor's attitude reflects an assessment of *prospective* influence and its *potential* impact on the outcomes of a given situation.

Given the hypothetical nature of trust, the cognitive component of a trustor's attitude reflects one's expectations about influence. Specifically, trust contains a prediction about another's likely behavior (e.g., Boone & Holmes, 1991; Gambetta, 1988) and its anticipated impact on the outcomes of the situation (e.g., Bhattacharya et al., 1998; Robinson, 1996). For

example, a trustor might say, “I expect that my co-worker will (or will not) do something that is likely to benefit (or harm) me.” Such expectations are a necessary aspect of a trustor’s attitude in that they represent functional beliefs about influence before actually receiving it and observing its effects in a given situation (Burt & Knez, 1996). In this way, a trustor’s expectations provide a future-oriented form of control. A trustor’s expectation of influence provides a basis upon which one attempts to think productively about potential influence and its outcomes in ambiguous situations (Lewicki et al., 1998; Wicks et al., 1999).

Although a necessary component of trust, expectations alone does not sufficiently define trust (Bhattacharya et al., 1998; Luhmann, 1988). That is, control is achieved not only through speculation, but also through a reconciliation of one’s values and goals with potential influence (Jones & George, 1998). The emotional and behavioral components of a trustor’s attitude reflect sentiments pertaining to consequential and motivational forms of control, respectively.

Trust is Consequential

The second component of trust is an emotional evaluation of influence. Specifically, research indicates that trustors often react emotionally (e.g., anger, disappointment, happiness, satisfaction) when their expectations of influence are contradicted or unmet (Bies & Tripp, 1996; Sitkin & Roth, 1993). These findings suggest that trustors not only predict what influence might occur in a given situation, but they also attach personal feelings to the outcomes of such influence. As such, trust is affect-oriented. The attitude reflects the extent to which trustors are personally invested in the outcomes of influence (Bhattacharya, et al., 1988; Hwang & Burgers, 1997; Jones & George, 1998; Wicks et al., 1999).

When considering a trustor’s feelings, it is logical to assume that a trustor who predicts favorable influence in a given situation also would hope for such influence and would be happy

if it occurred (or upset if it did not occur), and a trustor who predicts unfavorable influence also would dread such influence and be upset if it occurred (or happy if it did not occur). Although possible, such congruent reactions are not necessarily the case. It also is possible for a trustor to expect positive influence, yet not be particularly happy when it occurs (nor be upset when it does not) if the trustor is not particularly concerned about the personal consequences of the outcomes of such influence. Similarly, a trustor who expects negative influence might not be necessarily upset if it occurs (nor be happy if it does not), unless the trustor cares about the impact of such influence. This contingency indicates that a trustor's feelings represent more than a direct correspondence with one's expectation for influence and whether it is confirmed or contradicted. Rather, a trustor's feelings reflect one's personal values and the extent to which the outcomes from influence matter to the trustor (Jones & George, 1998; Robinson, 1996; Wicks et al., 1999). That is, a trustor might think that influence will facilitate a desirable outcome (i.e., a positive expectation), but might also dread such influence (i.e., a negative feeling) if its outcome has the potential to compromise one's values. For example, an employee might expect that his manager will help him get a promotion, but the employee might also dread such influence if the outcome it facilitates means having to ingratiate himself to his manager. As such, it is possible to have both favorable expectations of influence and unfavorable feelings about it, or vice versa.

A trustor's feelings are defined by the consequential nature of a trustor's assessment of influence. Specifically, influence has the potential to facilitate certain outcomes, as reflected in a trustor's expectations, and such outcomes are associated with a variety of consequences. That is, trustors inherently associate at least some potential benefit (i.e., opportunity) and some potential detriment (i.e., risk) with influence in a given situation (Kramer, Brewer, & Hanna, 1996; Luhmann, 1988). Whereas an expectation of positive influence reflects a perception of greater

opportunities than risks in a given situation, and vice versa, a trustor's feelings about these consequences define the emotional component of trust. For example, although a trustor might expect favorable influence in a given situation (e.g., help in getting a promotion), the trustor might also fear even the remotest risk associated with its outcomes (e.g., having to work longer hours) -- enough to dread the influence that is perceived to facilitate it. Conversely, a trustor who expects unfavorable influence (e.g., interfering with a possible promotion) might desire a particular opportunity associated with its outcomes (e.g., having more flexibility in one's schedule) -- enough to hope for the influence that could facilitate it. Of course, the trustor might not be particularly concerned about the potential consequences of influence. In either case, trustors attach personal feelings (e.g., fear, indifference, and hope) to the perceived consequences of the outcomes from influence, regardless of the expected impact from such influence. As such, a trustor's feelings reflect an openness to the potential consequences that might accompany influence in a given situation (Meyerson et al., 1996; Zucker et al., 1998).

A trustor's openness to influence is a necessary component of trust because it contributes to a trustor's maximized sense of control. Specifically, one's feelings about the perceived consequences of influence serve as a personal gauge for tolerating its potential outcomes. As such, a trustor's openness to influence provides affect-based control, such that it estimates the personal significance of influence in terms of the extent to which its outcomes adhere to (or compromise) one's values. The emotional significance of influence in terms of its perceived risks and opportunities contributes to an attitude that does not tolerate influence that might promote unacceptable consequences. Rather, a trustor's feelings serve as a productive guide to endorsing only influence that conforms to one's personal values.

Trust is Motivational

The third component of trust is a trustor's behavioral intention toward influence in a given situation. Although likely interrelated to the cognitive and emotional components of trust, this behavioral component offers additional information about a trustor's assessment of influence that is not necessarily contained in one's cognitive and emotional sentiments about influence. For example, a trustor might predict positive influence in a given situation for one reason and hope for it for another, yet still intend not to pursue it for yet another reason. Whereas a trustor's expectations reflect a hypothetical sentiment in terms of perceiving influence in relation to future possibilities, and a trustor's feelings reflect a consequential sentiment in terms of perceiving influence in relation to the personal value of its consequences -- a trustor's behavioral intentions reflect a motivational sentiment in terms of perceiving influence in relation to one's goals. That is, trust is goal-oriented, such that a functional assessment of influence also contains a sentiment about how influence will best achieve desired outcomes. As such, a trustor's attitude also reflects one's preference for influence in a given situation.

Because trust is about the perceived influence from the interaction among its source (i.e., the trustor), a target, and a context (i.e., trust is social), a trustor's behavioral intention pertains to one's own role in determining influence in a given situation (Mayer et al., 1995). Specifically, this component reflects one's intention to shape influence in a given situation through one's own behavior (McKnight et al., 1998). As such, trust is motivational in nature in that a trustor's behavioral intention is motivated by an inclination to affect the opportunity for influence in a given situation (Mayer et al., 1995; Zand, 1972). For example, if an individual does not trust a co-worker, the trustor might intend to lock one's filing cabinets based on an inclination to limit a co-worker's opportunity to potentially influence the confidentiality of its contents. If the

individual trusts the co-worker, the individual might intend to increase the co-worker's opportunity to access its contents, perhaps by supplying the co-worker with a key to unlock the cabinets. However, the specific action or inaction intended by a trustor does not necessarily reflect the motivational nature of the construct. Behaviors alone (i.e., communication, cooperation, confrontation) do not necessarily reflect the trustor's preference for influence in a given situation. Rather, it is the intention underlying such behavior that contributes to a functional assessment of influence. That is, trust is motivational in that a trustor's behavioral intentions reflect one's preferred exposure to influence in terms of one's inclination to affect if, and how, influence can occur in a given situation. For example, a trustor might be inclined to seek or avoid interacting with a given target in a certain context -- depending on one's preference for being exposed to influence that incorporates the combination of those two social elements.

Because trust is functional, trustors are motivated to behave in a way that promotes desirable outcomes. As such, the goal of a trustor's behavioral inclination is to generate influence that optimizes the possibility of positive influence and beneficial outcomes, as well as discourages the possibility of negative influence and detrimental outcomes (Bhattacharya et al., 1998; Chile's & McMackin, 1996; Kramer et al., 1996). However, it often is the case that a trustor has multiple, and even conflicting, goals for a given situation (Wicks et al., 1999). For example, a manager who intends to delegate an important task to a new employee might achieve a goal of contributing to the employee's training and experience, but might confound one's goal of flawless performance. In such a circumstance, a trustor's inclination toward influence provides a goal-oriented form of control, such that is intended to serve as a strategic balance among potentially conflicting goals to productively maximize the likelihood of attaining the most positive outcome (Wicks et al., 1999). As such, a trustor's inclinations represent a functional

preference for influence in a given situation, which necessarily maximizes one’s perceived ability to productively control the outcomes of ambiguous situations.

Summary of Trust’s Components

Table 3 summarizes the components of a trustor’s attitude. First, the hypothetical nature of trust defines its cognitive component as one’s expectation of influence in terms of its predicted outcomes. Such expectations provide a future-oriented sense of control to anticipate future events. Second, the consequential nature of trust is such that a trustor’s feelings reflect one’s openness to influence in terms of the perceived opportunities and risks associated with its potential outcomes. Such feelings provide an affect-oriented sense of control over the value of the outcomes from influence. Finally, trust is motivational, such that a trustor’s behavioral inclination to affect influence reflects one’s preference for influence in a given situation. This inclination provides a goal-oriented sense of control to attain desirable outcomes.

Table 3
Summary of the Components of Trust

SUMMARY OF THE COMPONENTS OF TRUST			
Characteristic	Component	Sentiment	Function
Hypothetical	cognitive	Expectation of influence in terms of its predicted outcomes.	future-oriented control over the uncertainty of future events.
Consequential	affective	openness to influence in terms of its perceived consequences.	affect-oriented control over the adherence of events to one’s values.
Motivational	behavioral	inclination toward influence in terms of its preferred manifestation.	goal-oriented control over desired outcomes.

Although interrelated, the three components of trust reflect different sentiments that contribute uniquely to a functional assessment of influence. As such, no one component sufficiently defines the attitude (McKnight et al., 1998; Whitner, et al., 1998). Consider the following examples of trustor sentiments regarding influence from a supervisor’s letter of recommendation on one’s prospects for obtaining a promotion:

Trustor Expectation: *prediction about potential influence.*

- a. I think my supervisor's letter will help me get the promotion.
- b. I think my supervisor's letter will not impact my promotion either way.
- c. I think my supervisor's letter will be hinder me from getting the promotion.

Trustor Openness: *perception of the consequences of influence.*

- a. I look forward to letting my supervisor know that I am looking for another job.
- b. I do not care if my supervisor knows that I am looking for another job or not.
- c. I dread letting my supervisor know that I am looking for another job.

Trustor Inclination: *preference for potential exposure to influence.*

- a. I am inclined to seek or accept a letter from my supervisor.
- b. It does not matter if I obtain a letter from my supervisor or not.
- c. I am inclined to avoid or reject a letter from my supervisor.

Notice that within each component of the trustor's attitude, three versions of a sentiment are provided to broadly reflect favorable, neutral, and unfavorable assessments of influence in the given situation (depicted as versions "a," "b," and "c," respectively). Although a trustor's attitude may contain only one version of each sentiment within a component at a time, a functional assessment of influence contains any combination of sentiments across the three components. For example, a trustor might simultaneously endorse "expectation-a," "openness-b," and "inclination-c." – or any combination of components. Such variation is possible because each is based on a different aspect of control. As such, a trustor's thoughts, feelings, and behavioral intentions reflect mutually exclusive sentiments. Although interrelated, the three components of a trustor's attitude reflect unique aspects of one's assessment of influence. Therefore, all three components of a trustor's attitude are necessary to fully define it.

The Dimensions of Trust

Recall that trust is versatile in nature, such that levels of trust can vary from situation to situation. As such, it is necessary to identify the dimensions along which levels of trust might vary. Although the three components of trust define the sentiments that a trustor's attitude contains, each sentiment can vary in more than just the three broad ways depicted in the above

examples. That is, in addition to the possible variations among the three components of one's assessment of influence, the level of a trustor's attitude also is based on variations within each component along three dimensions. To clarify the meaning of trust and accurately interpret a trustor's thoughts, feelings, and behavioral intentions, it is necessary to define the dimensions underlying a trustor's sentiments. Specifically, each trustor sentiment expresses three judgments about influence, each of which reflect a separate dimension along which trustor attitudes might vary. The three dimensions of trust are defined by the symmetrical, incremental, and conditional nature of a trustor's assessment of influence. Each is discussed below.

Trust is Symmetrical

The first dimension of trust pertains to the distinction between favorable and unfavorable assessments of influence. It is undisputed in the literature that a trustor can have either a positive or a negative attitude about influence in a given situation. For example, a trustor's expectations may be positive (e.g., predict beneficial influence) or negative (e.g., predict detrimental influence). A trustor's feelings may be positive (e.g., hopeful for consequences of influence) or negative (e.g., afraid of consequences of influence). Similarly, a trustor's inclinations may be positive (e.g., prefer to increase influence) or negative (e.g., prefer to decrease influence).

Unfortunately, the conceptual distinction between positive and negative assessments of influence often is misrepresented in existing definitions of trust. Several theories propose that the positive assessment of influence (i.e., trust) and the negative assessment of influence (i.e., distrust) are separate, albeit related, constructs (e.g., Lewicki et al., 1998; Sitkin & Roth, 1993). However, there are two major criticisms to the conceptual distinction between trust and distrust.

One reason for distinguishing between trust and distrust is based on the observation that positive and negative assessments of influence may represent reactions to different criteria (e.g.,

Sitkin & Roth, 1993). As pointed out in the previous section, however, it is inappropriate to define a trustor's attitude in terms of its antecedents, because antecedents might indicate why one trusts, but not how much one trusts (Kee & Knox, 1970; Mayer et al., 1995). Because trust is a subjective assessment of influence, the significance of any given antecedent to a trustor's attitude will vary based on the perceived dynamics of the situation in which it occurs (Clark & Payne, 1997), and the primary interests of the source (Jones & George, 1998). For example, a co-worker's competence in a given situation may generate a positive assessment of influence in a given situation for one trustor and a negative assessment of influence for another. As such, the significance of specific antecedents is not a credible basis to separate trust and distrust concepts because, when considered from the trustor's perspective, the relevance and impact on outcomes of any given antecedent is a subjective matter.

Lewicki et al. (1998) present another reason to distinguish between trust and distrust. They argue that trust and distrust are separate constructs because positive and negative assessments of influence can occur simultaneously, such that influence can be deemed highly positive in one facet of a relationship and highly negative in another. They argue that because the context of trust can change, so can the nature of the attitude. For example, you might trust your accountant to do your taxes, but not to fix your car. Although this contingency is not disputed, it is important to note that in these two situations, it is the level of trust that varies across the different contexts, not the construct of trust itself. Recall that because trust is a versatile attitude, it may vary in terms of the degree to which it is experienced -- not in terms of what is experienced. Rather, the versatile nature of trust is such that variations in levels of trust across situations reflect changed perceptions of the situation at hand. In a given situation, however, it is illogical to assume that a trustor could simultaneously trust and distrust *within* a

given situation. For example, a trustor would not intend to both seek and avoid influence at the same time. Therefore, it is inappropriate to make conceptual distinctions between trust and distrust when the versatile nature of the attitude is taken into account.

Although trust and distrust are not different attitudes, they do reflect different assessments of influence. Whereas trust reflects a favorable assessment of influence, distrust reflects an unfavorable assessment of influence. As such, trust is symmetrical in nature in that each trustor sentiment incorporates a judgment about whether influence is positive or negative. Given the inherent symmetry of this judgment, trust and distrust represent opposing standpoints on the same underlying dimension -- the perceived quality of influence (Clark & Payne, 1997; Gambetta, 1988; Jones & George, 1998; Kee & Knox, 1970). That is, the symmetrical nature of trust is such that levels of trust can vary in terms of the direction of the attitude (i.e., trust versus distrust). This characteristic of trust is depicted in Figure 1. Specifically, trust and distrust reflect opposite directions of a trustor's attitude, which are differentiated by the perceived quality of influence (i.e., positive or negative) of influence in a given situation.

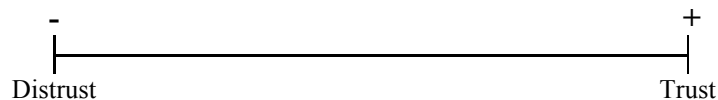


Figure 1
The Direction of Trust: Symmetrical Variations in Trust Levels

Trust is Incremental

The second dimension of trust clarifies distinctions between various levels of trust and distrust. Although an individual might say, "I trust (or distrust) my co-worker," trust is not a discrete, all-or-none phenomenon. Rather, the value of influence is perceived in degrees. Although most definitions describe trust as a continuous variable that ranges from high to low, they generally focus only on one side of the continuum, describing either high/low trust or

high/low distrust. In addition, researchers are inconsistent in how they refer to different levels of trust. For example, some theories suggest that “low trust” refers to a negative, suspicious perception of influence (e.g., Clark & Payne, 1997; Kee & Knox, 1970), while others imply that “low trust” is simply the lack of a positive, credulous perception (Bhattacharya et al., 1998; Gambetta, 1988; Hwang & Burgers, 1997). As a result, existing definitions tend to inappropriately equate “low trust” and “high distrust,” which confuses subtle distinctions among the various levels of trust (Lewicki et al., 1998). To clarify the distinction between the lack of a positive attitude (i.e., trust) and the presence of a negative attitude (i.e., distrust), it is necessary to consider the incremental nature of a trustor’s assessment of influence.

The incremental nature of trust is such that the extent to which influence is perceived to impact the outcomes of a given situation can vary for both trust and distrust. For example, positive assessments of influence (i.e., trust) may range from perceiving influence as having a *slightly* favorable to a *very* favorable impact on outcomes, and negative assessments of influence may range from perceiving influence as having a *slightly* to *very* unfavorable impact. As such, a trustor’s sentiments incorporate incremental judgments about the significance of influence in terms of the perceived size of its impact (i.e., small-medium-large) in addition to a symmetrical judgment about the quality of influence (i.e., positive-negative). Given that perceptions of influence can vary incrementally, distinguishing between levels of trust and distrust is based on the notion of ambivalence (Lewicki et al., 1998). Priester and Petty (1996) define ambivalence as a state of attitudinal indifference or uncertainty, a neutral midpoint between extreme perceptions. Among trustors, ambivalence falls between trust and distrust to represent a neutral attitude about influence in a given situation, which infers that influence is perceived as not particularly positive or negative. That is, ambivalence reflects the perception that influence does

not impact the outcomes of a given situation one way or the other. This neutral midpoint provides a basis for distinguishing between levels of trust and distrust, such that “low trust” infers that influence is perceived to have a *slightly favorable* impact on outcomes, whereas “high distrust” infers that influence is perceived to have a *very unfavorable* impact on outcomes.

The incremental nature of trust expands the trust/distrust continuum beyond a directional assessment of influence to include a second dimension of the attitude – magnitude. Whereas the direction of trust represents a symmetrical judgment about whether influence is positive or negative, the magnitude of trust represents an incremental judgment about how much positive or negative influence is perceived. As such, a trustor’s assessment of influence exists along a bi-directional continuum that is calibrated in both directions. Ambivalence represents the zero-point at which variations in the magnitude of trust emerge, such that the magnitude of a trustor’s attitude is its distance from zero. This dimension provides a definitive parameter for clarifying levels of trust and distrust, such that the relative significance of both positive and negative influence can vary in terms of the perceived size of its impact (i.e., small-medium-large).

Figure 2 depicts the incremental nature of trust, such that levels of trust can vary in magnitude based on the perceived significance of influence in a given situation. This characteristic defines trust along a calibrated continuum, on which a trustor’s attitude falls further away from ambivalence in either direction based on the perceived significance of positive or negative influence in a given situation.

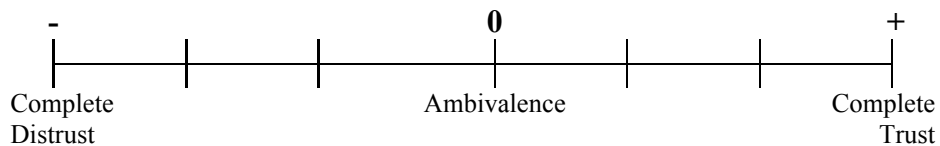


Figure 2
The Magnitude of Trust: Incremental Variations in Trust Levels

Trust is Conditional

The third dimension of trust pertains to the intensity of a trustor's sentiments about influence in a given situation, such that a trustor may feel, think, and intend things to varying degrees (e.g., *strongly* expect, *somewhat* feel, *slightly* intend). Specifically, the intensity of a trustor's thoughts, feelings, and behavioral intentions may vary in terms of the perceived likelihood that such sentiments are accurate and/or appropriate in a given situation (Bhattacharya et al., 1998; Hwang & Burgers, 1997). As such, trust is conditional in nature. Judgments about both the perceived quality and perceived significance of influence (in terms of the direction and magnitude of one's sentiments) are a condition of the trustor's relative confidence in such perceptions of influence in a given situation (Gambetta, 1988). That is, levels of trust (and distrust) depend on the extent to which a trustor is adamant in one's judgments about the quality and significance of influence in a given situation.

Given the conditional nature of trust, the direction and magnitude of one's assessments of influence alone are insufficient to capture variations in levels of the attitude. Whereas the direction and magnitude of trust define levels of trust in terms of how influence is perceived in a given situation, a third dimension reflects the intensity of such perceptions -- the strength of trust. The strength of a trustor's attitude represents the extent of one's thoughts, feelings, and behavioral intentions about perceived influence. This third dimension is important because it accounts for the strength of a trustor's perceptions, such that one's attitude is expected to be less extreme (closer to ambivalence) if perceptions of influence are flexible or weak than if they are unwavering. For example, a trustor might say, "I *strongly* expect that my co-worker's influence will benefit me," "I am *somewhat* afraid of what will happen if I am wrong about my co-worker's influence," or "I am *slightly* inclined to substantially increase my trustor's opportunity

to have influence.” Each sentiment is qualified by the degree to which it is experienced (i.e., strongly, somewhat, slightly). Such qualifiers represent the relative strength of the trustor’s sentiment. As such, a trustor’s attitude reflects not only the perceived quality and significance of influence (i.e., direction and magnitude), but also the intensity of such perceptions (i.e. strength).

The strength of trust is a necessary aspect of a trustor’s assessment of influence, such that variations in the intensity of a trustor’s perceptions affect the placement of a trustor’s attitude along the trust/distrust continuum. That is, the conditional nature of trust is such that the level of a trustor’s attitude can only be as high as the trustor’s sentiments are strong. For example, a trustor who perceives very positive influence in a given situation might be placed at the “complete trust” end of the trust/distrust continuum. However, if the trustor is not very confident about the accuracy of such a judgment (i.e., the judgment is weak), then the trustor’s attitude would likely be somewhat less than “complete trust.” The conditional nature of trust is such that one’s perceptions of influence are qualified by their relative strength to constitute an assessment of influence that maximizes one’s sense of control in a given situation.

A common misconception among existing definitions is the assumption that the strength (or weakness) of a trustor’s attitude corresponds to the level of personal control a trustor perceives in a given situation (e.g., Boone & Holmes, 1991; McAllister, 1995; Mayer et al., 1995; Hwang & Burgers, 1997; Sheppard & Sherman, 1998). It is assumed, for example, that if a trustor *slightly* expects positive influence in a given situation, then the trustor perceives a low amount of control over the outcomes of that situation. However, trust is functional in nature because the strength (or weakness) of a trustor’s convictions maintains an attitude that does not exceed one’s perceived ability to accurately estimate the merits of such influence in an ambiguous situation (Braddach & Eccles, 1989; Das & Teng, 1998; Wicks et al., 1999). For

example, a trustor with weak perceptions of influence does not have a lesser sense of control in the given situation. Rather, a sense of control is maintained because the strength of a trustor’s perceptions qualifies the level of trust, such that the trustor’s attitude may not exceed or fall short of the level that provides a maximized sense of control in a given situation. When taken from the trustor’s perspective, even weak sentiments provide a functional assessment of influence. As such, Sorrentino et al. (1995) state that “trust [or distrust] is the antithesis of doubt” (p. 314). That is, any level of trust maximizes a trustor’s sense of control.

Figure 3 depicts the strength of trust, such that levels of trust can vary in terms of the intensity of a trustor’s sentiments. As indicated by the dotted lines, strong trustor sentiments indicate a more extreme attitude than sentiments that are expressed less intensely.

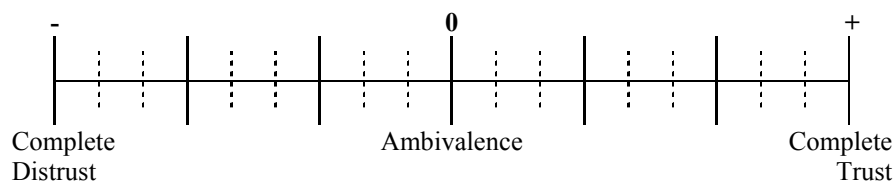


Figure 3
The Strength of Trust: Conditional Variations in Trust Levels

Summary of Trust’s Dimensions

Table 4 summarizes the three dimensions of trust, such that each component of a trustor’s attitude reflects a sentiment about influence that can vary in three distinct ways. That is, the direction, magnitude, and strength of a trustor’s attitude each reflect a separate judgment within the overall assessment of influence in a given situation. First, trust is a symmetrical construct, such that levels of trust can vary in their direction in terms of the perceived quality (i.e., positive, neutral, negative) of influence. Second, trust is an incremental concept, such that levels of trust can vary in their magnitude in terms of the perceived significance (e.g., small, medium, large) of influence in either direction. Third, trust is conditional in nature, such that levels of trust also

vary in strength in terms of the relative intensity (e.g., low, moderate, high) of one’s perceptions about the quality and significance of influence in a given situation.

Table 4
Summary of the Dimensions of Trust

SUMMARY OF THE DIMENSIONS OF TRUST		
Characteristic	Dimension	Underlying Judgment
Symmetrical	direction	the perceived quality of influence in terms of the value of its impact on outcomes.
Incremental	magnitude	the perceived significance of influence in terms of the size of its impact on outcomes.
Conditional	strength	the intensity of one’s sentiments in terms of the extent to which one is adamant in one’s perceptions of influence.
Each component of trust varies in all three dimensions.		

Because the three dimensions of trust reflect unique judgments about influence in a given situation, each is necessary to differentiate among various levels of the attitude. To illustrate how the dimensions of trust combine in different ways to reflect different assessments of influence, sample variations in trustor sentiments are provided below. Specifically, a trustor’s thoughts, feelings, and behavioral intentions can vary in terms of direction (**bolded**), magnitude (underlined), and strength (*italicized*), as follows:

- I *slightly* expect that this influence will be very **helpful**.
- I *somewhat* expect that this influence will be moderately **harmful**.
- I *strongly* expect that this influence will be slightly **helpful**.

- I am *slightly* **afraid** of the severe **drawbacks** of this influence.
- I am *somewhat* **hopeful** for the moderate **advantages** of this influence.
- I am *very* **afraid** of the slight **drawbacks** of this influence.

- I am *slightly* inclined to greatly **encourage** this influence.
- I am *somewhat* inclined to somewhat **discourage** this influence.
- I am *very* inclined to slightly **encourage** this influence.

In these examples each sentiment comprises three judgments about influence. Each judgment reflects a separate dimension along which a trustor’s attitude might vary, and each dimension can vary independently from the others to impact the level of trust in a given

situation. For example, the direction of a trustor’s attitude can differ from situation to situation, while the magnitude and strength may not. As such, all three dimensions are needed to accurately differentiate among levels of trust.

Figure 4 depicts the underlying trust/distrust continuum along which levels of trust can vary based on their direction, magnitude, and strength. Based on the perceived direction and magnitude of influence, more favorable (or unfavorable) assessments of influence reflect more extreme attitudes. However, the strength of such perceptions also affects the extremity of the attitude. For example, a very favorable assessment of influence moves closer to “complete trust” with more intense sentiments.

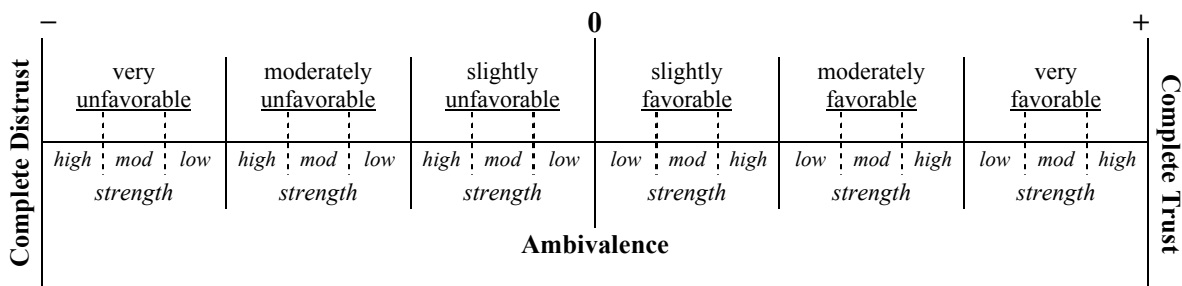


Figure 4
Underlying Trust/Distrust Continuum

A Comprehensive Definition of Trust

Given that trust has been conceptualized differently across various perspectives and settings, the literature has been lacking in a unified and comprehensive view of trust. To clarify the nature of trust, the current theory is based on the characteristics of the construct that are inherent to its meaning. Specifically, 10 basic characteristics of trust were identified based on a convergence and reconciliation of the overlapping and varying elements of existing theories. Each characteristic reflects a unique and necessary aspect of trust, so no one characteristic (or subset of characteristics) is sufficient to define it. Taken together, these characteristics define trust as follows:

Trust is a subjective assessment of another's influence in terms of the extent of one's perceptions about the quality and significance of another's impact over one's outcomes in a given situation, such that one's expectation of, openness to, and inclination toward such influence provide a sense of control over the potential outcomes of the situation.

Unlike existing definitions, this definition incorporates all 10 of trust's defining characteristics. To illustrate this point, Table 5 compares the current definition with existing definitions in terms of the characteristics of trust represented in each. Notice that the characteristics of trust are divergently and sporadically represented among the existing definitions. In contrast, the current definition contains all 10 characteristics of trust. By approaching the concept of trust in terms of its basic characteristics, the current definition combines and expands upon the assumptions of existing definitions with a more comprehensive interpretation of the construct. As such, the current definition offers researchers and practitioners a basis with which they might communicate and integrate ideas about trust more easily and meaningfully.

Table 5
Evaluation and Comparison of Trust Definitions

EVALUATION & COMPARISON OF TRUST DEFINITIONS										
Definitions of Trust	Referents of Trust				Components of Trust			Dimensions of Trust		
	Attitudinal	Social	Versatile	Functional	Hypothetical	Consequential	Motivational	Symmetrical	Incremental	Conditional
	<i>psycho-logical</i>	<i>about influence</i>	<i>adapts to situation</i>	<i>maximizes control</i>	<i>expectation of influence</i>	<i>openness to influence</i>	<i>preference for influence</i>	<i>direction of influence</i>	<i>magnitude of influence</i>	<i>strength of perceptions</i>
Current Definition	√	√	√	√	√	√	√	√	√	√
Bhattacharya et al. ('98)	√	√	√		√	√	√		√	√
Chiles & McMackin ('96)	√			√	√		√			√
Clark & Payne ('97)	√		√		√		√	√	√	
Creed & Miles ('96)	√	√		√	√					√
Cummings & Bromiley ('96)	√			√	√		√			√
Das & Teng ('98)	√	√	√		√		√			√
Gambetta ('88)	√		√		√		√	√		√
Hwang & Burgers ('97)	√		√	√	√					√
Jones & George ('98)	√		√		√	√			√	
Kee & Knox ('70)	√		√		√			√		√
Lewicki et al. ('98)	√		√		√	√	√			√
Luhmann ('88)	√	√	√			√	√		√	
McAllister ('95)	√				√		√			√
McKnight et al. ('98)	√	√			√	√	√		√	
Mayer et al. ('95)	√	√	√			√	√			√
Rotter ('67, '80)	√				√					√
Rousseau et al. ('98)	√	√	√		√		√			√
Whitner et al. ('98)	√	√			√	√			√	
Zand ('72)		√	√			√				√
Zucker et al. ('98)		√	√			√			√	

Note. This table does not represent an exhaustive list of existing trust definitions. Only recent and/or widely acknowledged cites that provide explicit definitions of trust are included. Checks indicate that a definition reflects the characteristic of trust as described in the sections above.

OPERATIONAL TRUST: THE FUNCTIONAL TRUST SCALE

Having defined trust, the next objective is to consider the proper measurement of the construct. Existing measures of trust are problematic for two main reasons. First, the basis of a good operational definition is a comprehensive conceptualization of the focal construct (Messick, 1995). As demonstrated in Table 5, existing trust definitions fail to define the construct accurately and completely. As such, no scale currently exists that provides a complete and direct assessment of all aspects of this complex construct (Bigley & Pearce, 1998). Second, to better understand a psychological construct, it is important that research be based on an operational definition that can be used consistently across various situations (Spector, 1992). Although many different trust scales are available, each is intended for specific research perspectives and agendas (Bigley & Pearce, 1998), which makes it virtually impossible to compare trust scores across settings and to integrate research findings.

To overcome the limitations associated with existing trust scale, trust is operationalized in terms of the comprehensive definition provided in the previous section. That is, the Functional Trust Scale (FTS) was constructed to operationalize trust in terms of its 10 defining characteristics. The FTS was constructed rationally to account for each characteristic of trust, then its content was assessed and refined for clarity based on feedback obtained in pilot studies (a comprehensive description of this process is provided in Appendix A). The FTS is shown in Appendix D and is described in depth in the following sections in terms of the operational advantages of its focus, content, ratings, and structure.

The Focus of the FTS

The FTS operationalizes trust in terms of its referent characteristics. That is, the general language and framing of the FTS focuses on an attitude (i.e., trust is attitudinal) about social

influence (i.e., trust is social) that reacts to perceptions of a given situation (i.e., trust is versatile) to maximize one's sense of control over outcomes (i.e., trust is functional). By explicitly focusing on each of its referent characteristics, the FTS provides a more direct measure of trust than currently exists. The operationalization of each referent of trust is discussed below.

Attitudinal Focus

The first referent of trust defines it as an attitude (not a behavior). As such, the FTS focuses on assessing trust in terms of the psychological experience of its source. The FTS is a self-report measure, such that respondents are trustors who indicate their thoughts, feelings, and behavioral intentions regarding influence in a given situation. By focusing on the trustor's experience, the FTS provides a more direct and accurate measure of a trustor's attitude than existing trust scales that attempt to infer trust from potentially related constructs.

One of the biggest and most pervasive limitations of existing trust scales is the tendency to focus on constructs that are peripheral to the trustor's experience, as opposed to the attitude itself. For example, Butler's (1991) widely used Conditions of Trust Inventory measures trust through assessments of various target characteristics such as loyalty, competence, and honesty. This approach measures potential antecedents to trust (i.e., perceived target characteristics), which focuses on why one trusts - not the attitude itself (Kee & Knox, 1970; Mayer et al., 1995). This is an indirect assessment of trust that may misrepresent the attitude. Inferring trust from potential antecedents assumes that a particular factor (e.g., competence, loyalty) is valued by all trustors across all situations. However, Butler's own research indicates that different target characteristics predict trust in different situations (Butler & Cantrell, 1984). These findings suggest that, although a trustor may rate a target as highly competent, perceived competence may or may not be a significant predictor of one's trust in any given situation. Therefore, measuring

trust in terms of perceptions of target characteristics (or other potential antecedents of trust) might misrepresent the trustor's attitude. A similar case can be made regarding scales that focus on the potential consequences of trust. That is, researchers often attempt to measure trust by focusing on potential behavioral manifestations of the attitude, such as overt examples of cooperation, communication, and delegation (e.g., Burt & Knez, 1996; Currall & Judge, 1995). This approach assumes that actual behaviors are a necessary result of trust. However, trust is an attitude that may or may not manifest into specific behaviors. For example, an individual who cooperates with someone does not necessarily trust that person; perhaps the individual is pressured or coerced into cooperating. Furthermore, specific behavioral outcomes of trust are likely to vary from situation to situation, so no one set of behaviors are likely to present a consistent representation of trust (Mayer et al., 1995). Consequently, measures of the potential outcomes of trust also might generate inaccurate inferences about a trustor's attitude.

The FTS attempts to avoid the potential for making indirect, and potentially inaccurate, inferences about trust. Therefore, instead of assessing trust in terms potentially related constructs, the FTS focuses on the attitude itself, as it is expressed by a trustor's thoughts, feelings, and behavioral intentions. The FTS items ask respondents (i.e., trustors) to rate influence in a given situation in terms of each of these sentiments. The FTS content is discussed in further detail in a later section.

Social Focus

The second referent of trust defines trust as social in nature, such that the object of a trustor's attitude is the perceived influence over one's outcomes that results from interaction among a trustor, target, and context. As such, trust scales should focus on evaluations of influence – not on evaluations of the social elements that produce influence. To focus on the

proper object of trust, the FTS evaluates perceptions of influence. Specifically, the FTS is presented to respondents as a “Social Influence Survey,” with the following instructions:

Social Influence refers to anything that might directly or indirectly impact the outcome(s) of a situation. Consider the influence in the following situation: (Users insert the target and/or context of the influence to be rated).

The FTS items then ask participants to indicate their perceptions of such influence. For example, an FTS item reads, “If (*user-specified influence*) occurred, there would be undesirable/desirable result.” Notice that this item sets influence as the object of ratings, such that trustors rate the influence that comes from interacting with a given target in a given situation. (Details of FTS response scales are provided in a separate section.) By focusing on trustor sentiments about influence, the FTS provides a direct assessment of the proper object of trust -- as opposed to most existing trust scales.

Existing trust scales most often assign the trustor (e.g., Couch, Jones, & Adams, 1996; Rotter, 1967, 1980), target (e.g., Butler, 1991; Clark & Payne, 1997; Johnson-George & Swap, 1982; McAllister, 1995), and/or context (e.g., Couch et al., 1996; McAllister, 1995) as the object of trustor ratings. Such scales focus on evaluations of only one of these three elements, as opposed to their combined effect – social influence. For example, Couch et al.’s Generalized Trust Scale infers trust from evaluations of its source, which is based on agreement to items such as “I make friends easily.” Notice that the object of this item is the trustor, not influence. McAllister’s Cognition-Based Trust Scale infers trust from evaluations of its target, which is based on agreement with items such as “Most people, even those who aren’t close friends of this individual, trust and respect him/her as a co-worker.” This scale sets the target as the object of trustor evaluations.

The problem with this approach is that a trustor's views of oneself, a target, and a context are mutually exclusive evaluations. That is, just because individuals do not think that they make friends very easily, does not mean that they necessarily would have an unfavorable view of a specific target and/or context. Similarly, a negative evaluation of a target does not necessarily reflect a negative evaluation of the other elements of social influence. For situations in which a trustor's view of oneself, a target, and a context do not align, inferring perceived influence from evaluations of its individual elements may misrepresent a trustor's attitude. That is, focusing on individual elements of influence misidentifies the object of trust, which can lead to inaccurate inferences about a trustor's attitude. By focusing directly on the assessment of influence, the FTS provides a direct measure of trust that relies less on potentially inappropriate assumptions about what specific perceptions of its source, target, and/or context might infer.

Versatile Focus

The third referent of trust pertains to its versatile nature as an attitude that remains conceptually stable across situations. As such, a measure of trust should be broad enough to apply to a variety of situations, so that scores can be meaningfully compared and replicated across situations (Spector, 1992). This standard requires that trust scales contain little, if any, situation specificity that might hinder its applicability to different situations. However, it also is necessary to provide a clear and specific frame of reference for respondents to consider so that scores more accurately reflect the attitude (Messick, 1995). According to this standard, situation specificity is needed within a scale to appropriately focus trustor ratings toward a given target in a given context. Given these two standards, the FTS is designed be both broadly applicable and to focus on trust as it occurs within specific situations.

The key to balancing these two objectives is to focus on trust as it occurs in specific situations without incorporating situation-specific references throughout the content of the scale. To do so, FTS items refer broadly to “influence” so that they are free from the situation-based references that might limit the scale’s usefulness across situations. Rather, the situation surrounding a trustor’s ratings is specified within the instructions of the FTS. Recall the FTS instructions quoted above. These instructions include a blank space in which the situation of a given trustor’s attitude is specified. That is, FTS users are instructed to “insert the target and/or context of trust” so that the respondents may focus their ratings on the situation given. The items then refer to this situation of influence by asking, “If this situation occurred . . . ?” Note that during pilot testing, respondents indicated that it was difficult to keep referring to the instructions to focus their ratings on each item (see Appendix A). To remedy this, the FTS was designed to give users the option of simply replacing the phrase “If this situation occurred” in each item with the actual wording of the frame of reference specified in the instructions, without necessarily altering the items’ intent or integrity.

This approach allows users to quickly and easily vary the situation in which trust is measured without having to re-write or replace items to fit individual research settings. As such, the FTS provides situation-based specificity that is user-imposed, not scale imposed. This format allows the FTS to be more broadly applicable across a variety of situations than scales that are inundated with situation-specific references throughout its items. Existing trust scales typically contain items that represent examples of what trust might look like in various situations. For example, Johnson-George and Swap’s (1982) Specific Interpersonal Trust Scale measures agreement to items such as “If _____ agreed to feed my pet while I was away, I wouldn’t worry about the kind of care it would receive.” Items such as this define the situation

surrounding a trustor's response (i.e., pet care), which limits the scale's usefulness to situations of trusting another in general or to only those situations that are directly related to the specific examples referred to in its items. The FTS, on the other hand, is designed to capture trustor ratings of influence in any situation in which trust might occur, such that users can ask the same questions about various frames of reference for the attitude. As such, the FTS allows users to specify a frame of reference that respondents rate, while remaining flexible enough to accommodate a variety of situations and research interests.

As a versatile attitude, trust may occur in different types of relationships. Trust occurs toward individuals (e.g., manager, employee, co-worker), groups (e.g., team, peers, staff), and even objects or entities (e.g., computers, management, organization). In addition, trust occurs in all areas of life – not just work life. As such, a trust scale should be flexible enough to measure trust toward a variety of targets and contexts. Therefore, the FTS is designed to afford users enough flexibility to assign any target and any context, as well as any combination of the two. Specifically, users can vary the level of specificity of the target by defining a specific target (e.g., one's supervisor) or a more general target (e.g., managers in general). Similarly, users can vary the specificity of the context by defining a very specific (e.g., Monday morning meetings) or broad (e.g., at work in general) contexts of influence. By allowing users to manipulate the level of specificity in both the target and context of trust, the FTS is better equipped than existing trust scales to focus trustor responses toward a particular situation of interest.

Existing trust scales, on the other hand, frequently are limited to only certain types of targets and/or contexts. For example, Johnson-George and Swap's (1982) scale focuses respondents toward a specific target across variety of contexts (e.g., work, play, meetings). Rotter's (1967, 1980) Interpersonal Trust Scale (ITS) assesses trust toward multiple targets (e.g.,

government, teachers, strangers) in multiple contexts (i.e., school, family). By failing to focus respondents toward a given target and context, it is difficult to establish what influence they are expected to evaluate. This makes existing trust scales susceptible to wide variability in what respondents focus on when considering social influence, which can lead to uninterpretable scores (Messick, 1995). In addition, a scale-imposed frame of reference limits the applicability of the scale across situations. Consequently, multiple trust scales often are used to measure trust across different types of situations, which contributes to the inconsistency and incompatibility of trust measures across studies (Bigley & Pearce, 1998). With the FTS, however, users may define and vary both a target and context of trust so that the same items may be used to measure and compare trust across a variety of user-defined situations and research agendas.

Functional Focus

The fourth referent of trust characterizes it as a functional attitude that maximizes a trustor's sense of personal control over ambiguous outcomes. As such, a trustor's perceptions about the desirability of influence are subjective and should be considered from the trustor's perspective. The FTS accommodates the functional nature of trust by allowing for the subjectivity with which rating should be made, and more importantly, should be interpreted. That is, the FTS items are written so that valence-loaded items do not bias the perceived desirability of influence. FTS items are neutral statements that contain blank spaces for respondents to supply the desirability ratings (e.g., "If . . . , there would be _____ outcomes."). Respondents fill the blank by selecting among response options that range from "very favorable" to "very unfavorable." In so doing, the FTS focuses on the trustor's perspective to assess the perceived desirability of influence.

Existing trust scales, on the other hand, attempt to tap the perceived desirability of influence by listing various examples of presumed “good” (e.g., honesty, competence, fairness) and/or “bad” (e.g., deception, ineptness, belligerence) behaviors, to which respondents rate their agreement on the extent to which each good/bad behavior is indicative of influence. Scales based on this approach commonly score agreement with positively valenced items (i.e., examples of “good”) as indicators of “trust” and agreement with negatively valenced items (i.e., examples of “bad”) as indicators of “distrust” (or the lack of trust). For example, McAllister’s (1995) Cognition-Based Trust Scale asks respondents to indicate their level of agreement with statements such as “This person approaches his/her job with professionalism and dedication.” Agreement with this statement is coded as “trust” whereas disagreement is “distrust.” However, it is possible that a trustor perceives the target as professional and dedicated, but still does not consider that a desirable trait in a given situation. In such a case, the respondent would have intended to indicate “distrust,” but the scale would have calculated “trust.” This practice contradicts the functional nature of trust by restricting the subjective nature of the perceived desirability of influence, which leads to potential misrepresentations of the trustor’s attitude. Instead of asking respondents to rate “good” or “bad” influence, the FTS allows trustors to indicate the desirability of influence in terms of their responses (rating scales are discussed in a separate section). As such, each FTS item may be rated favorably or unfavorably from the trustor’s perspective so that FTS scores reflect a subjective, unbiased assessment of influence. This provision is intended to facilitate the direct measurement of a trustor’s functional assessments of influence.

Summary of the FTS's Focus

The FTS was designed to focus on the construct as it is defined by its referent characteristics. First, the FTS maintains an attitudinal focus, such that it focuses on trustor thoughts, feelings, and behavioral intentions in an attempt to provide a direct assessment of the attitude as it is experienced by its source. Second, the FTS was designed with a social focus, such that in that it focuses on perceptions of influence from a target in a given in an attempt to provide a more direct measure of the object of trustor sentiments. Third, the FTS accommodates the versatile nature of trust, by allowing users to specify the frame of reference in a variety of ways, while still using the same items to assess trust in different situations. Finally, the FTS is functionally focuses, such that it requires respondents to indicate the desirability of influence rather than making global assumptions about perceptions of “good” and “bad” influence. These four provisions were incorporated into the FTS to offer a direct assessment of trust as it is defined by its referent characteristics.

The Content of the FTS

The representativeness of any scale depends largely on the completeness of its content (Messick, 1995). Recall that as an attitude, trust consists of one's thoughts, feelings, and behavioral intentions toward another in a given situation (Clark & Payne, 1997; Cummings & Bromiley, 1996). Furthermore, each of these three components of trust represents a unique sentiment about the perceived desirability of influence (McKnight et al., 1998). Therefore, all three components of trust are necessary for a complete representation of the construct. Unfortunately, existing trust scales rarely contain items that measure all three components of a trustor's attitude. For example, McAllister's (1995) and Couch et al.'s trust scales measure a trustor's thoughts and feelings (albeit toward an inappropriate object of the attitude), whereas

Currall and Judge's (1995) and Mayer and Davis's (1999) scales measure only behavioral intentions. To provide a more complete measure of trust, FTS items tap the three necessary components of the attitude. The FTS consists of fifteen items, five items for each component of a trustor's attitude (i.e., cognitive, affective, and behavioral), which are operationalized in terms of the hypothetical, consequential, and motivational characteristics of the attitude, respectively.

Hypothetical Items

The first component of trust is one's thoughts about influence. Given the hypothetical nature of trust, this component reflects a trustor's expectation of influence in terms predicting how such influence will impact the outcomes of a given situation (Boone & Holmes, 1991; Bhattacharya et al., 1998; Gambetta, 1988). As such, trust is a future-oriented assessment of influence, which incorporates speculation about the desirability of potential influence. However, existing trust scales often operationalize this characteristic of trust in terms of assessments of past and/or present influence (e.g., Cook & Wall, 1980; Clark & Payne, 1997; Couch et al., 1996; McAllister, 1995). Although perceptions of past and/or present influence might impact perceptions of future influence as potential antecedents to trust (Mayer et al., 1995), it is more direct and appropriate to measure a trustor's thoughts (and feelings and behavioral intentions) about the potential of future influence. Therefore, the FTS operationalizes the hypothetical nature of trust in terms of one's expectations about potential influence in a given situation. This cognitive component of trust is contained in the following items:

Hypothetical FTS Items: Expectations of Influence

- If *this situation occurred*, there would be negative/positive outcomes.
- If *this situation occurred*, there would be a bad/good result.
- If *this situation occurred*, the result would be undesirable/desirable.

- If *this situation occurred*, it would cause more harm than good/more good than harm.
- I think that it would be harmful/helpful if *this situation occurred*.

Notice that these items pertain to a hypothetical situation, and respondents must consider what they think would happen if it occurred to respond. Although the response options vary for each item, they all range from “very favorable” to “very unfavorable” descriptions of influence. As such, these items tap the perceived desirability of expected influence.

Consequential Items

The second component of trust is one’s feelings about influence in terms of the perceived consequences if it occurred. Recall that the consequential nature of trust is such that a trustor is personally invested in the potential risks and opportunities of influence. Given that a trustor might anticipate positive (or negative) influence, yet dread (or hope) what could happen if expected influence occurred, it is inappropriate to assume that a trustor’s thoughts and feelings about influence reflect the same sentiment. Therefore, the FTS incorporates an assessment of influence based on a trustor’s personal investment in the outcomes of influence in terms of one’s openness to influence in a given situation. The following FTS items were constructed to tap this emotional component of trust:

Consequential FTS Items: Openness to Influence

- I would be upset/happy if *this situation occurred*.
- The possibility that *this situation could occur* gives me grief/comfort.
- I feel that it would be risky/safe if *this situation occurred*.
- If *this situation occurred*, I would dread/look forward to the outcomes.
- If *this situation occurred*, I would be worried/excited about the outcomes.

Notice that these items ask respondents to evaluate influence in terms of how they would feel if it occurred. Although the anchors for the response options differ across items, all response options for emotional evaluations of influence ranging from “very favorable” to “very unfavorable.” These items were designed to capture the perceived desirability of influence in terms of one’s openness to the consequences of influence.

Motivational Items

The third component of trust is a trustor’s behavioral inclinations toward influence in a given situation. Given the motivational nature of trust, a trustor’s behavioral inclinations pertain to what one prefers to do (or not do) to affect the opportunity for influence in a given situation. Several trust scales measure this component in terms of the likelihood of engaging (or willingness to engage) in trusting behaviors (e.g., Currall & Judge, 1995; Mayer & Davis, 1999). Trusting behaviors are any voluntary action (or inaction) that are intended to attain control over one’s outcomes by altering the course of potential influence in a given situation (Zand, 1972). As such, existing trust scales often provide examples of various trusting behaviors and ask respondents to indicate their intention to engage in them. For example, Currall and Judge’s scale asks respondents about how likely they are to do things such as “Think carefully before telling (target) my opinions” (reverse scored). This is the most common approach to assessing trustors’ behavioral inclinations. However, listing examples of trusting behaviors limits the applicability of the scale. That is, itemized trusting behaviors may or may not be relevant or functional across all situations and trustors. It is possible that disclosing one’s opinions, for example, is a common trusting behavior when it comes to close, intimate relationships, but not necessarily when it comes to formal, working relationships. Therefore, measuring the

motivational aspect of a trustor's attitude in terms of the likelihood of trusting behaviors fails to accommodate the functional nature of trust, and it limits the applicability of a scale.

The FTS operationalizes a trustor's behavioral intentions in terms of one's preference for receiving (or not receiving) influence from a given target in a given situation. That is, the FTS taps the inclination to affect potential influence to attain desirable outcomes. This represents a direct measure of a trustor's intention to engage in trusting behaviors without needlessly encumbering the scale with situation-specific behaviors. The FTS items constructed to tap this motivational component of trust are as follows:

Motivational FTS Items: Preferences for Influence

- If I could, I would do things that minimize/maximize the chance that *this situation could occur*.
- If I had an opportunity, I would avoid/seek the chance that *this situation could occur*.
- I prefer to be protected from/open to the chance that *this situation could occur*.
- The possibility that *this situation could occur* should be discouraged/encouraged.
- If I could, I would decrease/increase the chance that *this situation could occur*.

Notice that these items pertain specifically to preference for receiving (or not receiving) influence in terms of how trustors are inclined to affect the opportunity for such influence to occur. Again, rating options vary from item to item, but all options range from "very favorable" to "very unfavorable" inclinations toward influence in a given situation. By focusing on respondents' preferences for potential influence, these items tap a trustor's functional assessment of influence without proscribing specific behaviors that may or may not be indicative of trust in a given situation.

Summary of the FTS's Content

Overall, the FTS contains items designed to tap the cognitive, affective, and behavioral components of a trustor's attitude. In addition, the FTS contains separate items for each of these components so that the scale may distinctly assess each of these mutually exclusive sentiments about influence. Existing trust scales often are based on assumptions about overlapping sentiments, which can lead to inaccurate interpretations of responses. However, what one expects from influence and what one intends to do about influence may or may not overlap. By separating the components of trust, the FTS avoids making potentially inaccurate assumptions about the congruence among a trustor's thoughts, feelings, and behavioral intentions.

In addition, separating the components of trust allows researchers to interpret trust scores based on the relative impact from each component. Such distinctions can contribute to research on the development of trust, because different antecedents might impact each component of a trustor's attitude differently (Sitkin & Roth, 1993). Measuring each component of trust allows researchers to better identify how various antecedents affect trust in different situations (e.g., increase expectations, decrease feelings, strengthen inclinations). By distinguishing among the components of trust, the FTS provides a tool with which researchers may not only identify variations in levels of from situation to situation, but also identify specifically how trust may increase or decrease in various situations. As such, trust research based on the FTS can facilitate meaningful theory testing and development about the growth, decline, and outcomes of trust in a variety of situations.

The Responses on the FTS

In addition to incorporating items that appropriately represent the content of the attitude, it is important that psychological constructs be measured using response scales that provide

precise and representative estimates of the focal construct (Messick, 1995). Recall from above that trust is conceptualized along a continuum ranging from complete trust, through ambivalence, to complete distrust (see Figure 4). Recall also that variation along this trust/distrust continuum is a function of three dimensions of a trustor's sentiments about influence. Specifically, a trustor's thoughts, feelings, and behavioral intentions each may vary in terms of judgments about the quality (i.e., direction) and significance (i.e., magnitude) of influence as well as the intensity of such judgments (i.e., strength). Each dimension represents an aspect of a trustor's perceptions that separately impacts the placement of one's attitude along the underlying trust/distrust continuum. As such, a representative measure of trust should incorporate all three dimensions of a trustor's attitude.

Existing trust scales often measure only one of the dimensions. For example, Robinson (1996) uses a forced-choice response scale on which respondents choose a positively or negatively valenced option to characterize influence (e.g., beneficial versus detrimental). This approach captures the direction of a trustor's attitude, but fails to assess its magnitude and strength. Butler and Cantrell (1984) ask respondents to indicate how much they "trust" a given target on a 5-point scale ranging from "not at all" to "very strongly." Responses to this scale indicate the strength of trust, but not the direction or magnitude. By neglecting the direction and magnitude of trust, it is unclear whether "not at all" ratings indicate low trust or distrust – two very different responses. The use of Likert-type response scales also tends to limit the possible variability in trust scores. For example, McAllister's (1995) Affect-Based Trust Scale assesses trustor agreement on a 7-point scale ranging from "strongly agree" to "strongly disagree" to such items as "I can talk freely to this individual about difficulties I am having at work and know that (s)he will want to listen." This approach taps the direction of the sentiment in terms of the agree-

disagree dichotomy and the strength of the sentiment in terms of the strongly/somewhat/slightly anchors, but it does not address the magnitude of one's assessment of influence. That is, the perceived significance of influence is not captured. However, it is possible that although a trustor might strongly agree that influence will be positive, the trustor might not agree that such positive influence will have a large impact on one's outcomes. In such a case, the trustor's attitude might be much lower than "strongly agree" than this item might suggest. By not measuring all three dimensions of trust, existing trust scales limit the scope of possible trust scores and potentially misrepresent a trustor's placement along the trust/distrust continuum. In contrast, the FTS was constructed to tap all three dimensions that vary levels of trust.

Not only is it important that all dimensions of trust be measured to provide a complete representation of trust, but it also is important that the dimensions of trust be estimated in a way that offers a direct representation of the attitude (Messick, 1995). To do so, the FTS measures the direction, magnitude, and strength of trustor sentiments with multiple response scales as opposed to incorporating one or more of these dimensions within the content of the items. This approach allows the FTS to capture assessments of influence from the trustor's perspective, which maintains the functional nature of the attitude and eliminates potentially misleading assumptions about the desirability of influence. To illustrate this point, it is helpful to consider how trustor responses might be misinterpreted when the dimensions of the attitude are incorporated into the items of a scale rather than its ratings.

Existing trust scales often attempt to estimate multiple dimensions of trust simultaneously by incorporating one or more of the dimensions into the content of their items. It is common among existing trust scales that items contain valence-loaded references that characterize the desirability of influence, to which respondents indicate their level of agreement (e.g., Cummings

& Bromiley, 1996; Johnson-George & Swap, 1982; McAllister, 1995). For example, an item on Cook and Wall's (1980) trust scale reads, "I feel quite confident that the firm will always try to treat me fairly," to which trustors indicate their level of agreement on a 7-point scale ranging from "strongly agree" to "strongly disagree." Notice the positive bias in the item's wording, such that this scale assumes that "will treat me fairly" is an example of positive influence. Given the item's wording, disagreeing with the positive statement about influence would suggest distrust, whereas agreeing with the positive influence would represent trust -- but only if the trustor considers fairness to be functional in a given situation. To determine the magnitude of a trustor's sentiment, one must focus on the increments of the agree/disagree response scale (i.e., "strongly" versus "slightly" agree/disagree). However, because the item is positively valenced, it is unclear whether the "strongly disagree" response would indicate a neutral attitude (i.e., not at all positive) or a negative attitude (i.e., the opposite of positive). In addition, this item states "I am quite confident," which apparently is intended to establish the strength of the attitude within the item text. In so doing, however, it becomes unclear which part of the item trustors are responding. That is, if someone "strongly agrees" with the statement, does that mean that the individual strongly agrees with the "I feel quite confident" part (i.e., imposed strength of trust) or with the "treat me fairly" part (i.e., imposed direction of trust)? Because these dimensions are imposed within the item content rather than measured directly with response scales, clear interpretations of trustor perceptions are difficult -- if not impossible. By incorporating dimension-relevant information into the item with qualifying terms such as "quite" and valenced terms such as "confident," existing trust scales likely generate uninterpretable scores. Therefore, varying item content in terms of valence and qualifiers is an indirect approach to estimating the direction, magnitude, and/or strength of a trustor's attitude that limits the full range of trust

levels. The FTS attempts to avoid this problem by eliminating all valence-loaded text from items and directly obtaining ratings on each of the three dimensions of trust. The rating scales used for each dimension of trust are described separately below.

Symmetrical Ratings

Recall that trust is symmetrical in nature, such that trust and distrust are opposite ends of a single, bi-directional continuum. As such, the FTS contains response options for each item that range in the perceived quality of influence from unfavorable through neutral to favorable. Specifically, FTS response options are arranged along a horizontal continuum, such that responses on the left side of the ambivalence indicate negative sentiments about influence, whereas responses to the right of the neutral midpoint indicate positive sentiments. For example, one of the motivational items on the FTS reads, “If I could, I would do things that minimize/ neither/maximize the chance that this situation could occur.” The direction responses include “minimize” (i.e., negative inclination toward influence; perception of unfavorable influence), “neither” (i.e., neutral inclination toward influence; perception of neutral influence), and “maximize” (i.e., positive inclination toward influence; perception of favorable influence). This symmetry allows respondents to indicate the perceived quality of influence in terms of the direction of their sentiments.

The specific anchors used on the FTS to reflect the direction of a trustor’s sentiments (i.e., negative, neutral, positive) vary across items according to the appropriateness of terms for each item. For example, response options for the direction of a trustor’s expectations of influence range on one item from predicting harmful, neutral, or helpful influence from a given target within a given context. On an item about a trustor’s preference for influence, respondents are asked to indicate whether they are inclined to avoid or seek (or neither) influence in a given

situation. Although the anchors differ across items of the FTS, they all reflect a dichotomy to capture the direction of a trustor's sentiment. In addition, by measuring the direction of trust with rating scales instead of valence-loaded items, the FTS may provide a direct assessment of a trustor's functional assessment of influence.

Incremental Ratings

The second dimension of trust is the magnitude of trustor sentiments, which is defined by the incremental nature of the attitude. As such, assessments of influence vary in terms of the size of its perceived impact over the outcomes of a given situation. Specifically, the incremental nature of trust is such that points on the trust/distrust continuum are calibrated on both sides of the neutral midpoint to reflect the perceived significance of influence in terms of the size of its impact. For example, a trustor might expect influence to be extremely desirable or only slightly desirable. Similarly, a trustor might feel afraid of all consequences of influence or only afraid of only some. In either case, the magnitude of trust reflects the perceived extent of the impact from influence in a given situation. As such, this dimension is crucial to identifying a trustor's functional assessment of the favorability of influence in a given situation.

To capture the magnitude of a trustor's sentiments, the FTS expands the symmetrical, trust/distrust to include increments in both directions. Specifically, response options for each item vary along a bi-directional, calibrated continuum of ratings to capture both the direction and magnitude of a given sentiment on a single rating scale. Respondents indicate the perceived favorability of influence on a 7-point scale with options ranging from perceptions of very favorable, through neutral, to very unfavorable influence. This rating scale simultaneously incorporates the direction of a trustor's sentiment in terms of all three variations in the perceived quality of influence (i.e., positive-neutral-negative) and the magnitude of a trustor's sentiment in

terms of all three variations in the perceived impact of such influence (i.e., small-medium-large) on both sides of the neutral midpoint. By including the direction and magnitude of a trustor's sentiments into a single response scale, the FTS may quickly and accurately capture perceptions of influence in terms of both its quality and significance in a given situation.

The wording of the specific magnitude anchors varies across items to match their corresponding sentiment. For example, the response options to the statement, "I think that it would be harmful/helpful if this situation occurred," include "slightly harmful/helpful," "moderately harmful/helpful," and "very harmful/helpful." As such, respondents simultaneously indicate both the direction and magnitude of the sentiment about influence. On this item, the "harmful-neither-helpful" assessment represents the perceived quality of influence (i.e., direction), where "neither" represents the neutral response. The distance from this neutral point in terms of the small-medium-large increments represents the perceived impact of influence (i.e., magnitude). A response on that influence will be "slightly helpful" suggests that influence is perceived a little favorable, whereas a response of "somewhat harmful" suggests that influence is perceived as moderately negative. Although the anchors vary across FTS items in wording, they all follow the same 7-point, direction-by-magnitude response format with options ranging from very unfavorable (through neutral) to very favorable ratings of influence. This response format is used to simultaneously assess the perceived quality and significance of influence. Taken together, these two judgments reflect how a trustor perceives influence in a given situation.

Conditional Ratings

After indicating one's perceptions of influence on the direction-by-magnitude rating scale described above, respondents are asked to indicate the intensity of such perceptions on a second rating scale. This second rating scale represents the strength of a trustor's sentiments in that

respondents indicate their level of confidence in, or commitment to, their perceptions of influence (i.e., low, moderate, high). This dimension is important because it is the final link to accurately placing a trustor's attitude along the conceptual trust/distrust continuum. Specifically, the direction and magnitude of a trustor's sentiments indicate the perceived desirability of influence, but the strength of the trustor's sentiment indicates the extent of such perceptions. For example, a trustor who perceives influence to be very desirable in a given situation might be placed close to the "completely trust" end of the trust/distrust continuum. However, this is only the case if the trustor is completely confident in one's perceptions of influence. If the trustor is only a little certain that influence is very desirable, then the trustor's attitude is more likely to fall short of an extreme position of "completely trust" on the trust/distrust continuum. As such, the strength of a trustor's sentiments about influence qualifies one's perceptions of influence to more accurately identify where on the trust/distrust continuum a trustor's attitude falls.

The FTS operationalizes the strength of trustor sentiments in terms of a follow-up question (part "b") to the primary item about the perceived desirability of influence (part "a"). This follow-up question asks trustors to indicate the extent to which the sentiment is thought, felt, or inclined on a 4-point scale ranging from "not at all" to "very much." Again, the specific wording of anchors might differ between items, but they all address the relative intensity of the trustor's sentiments. For example, respondents who indicate that they expect somewhat beneficial influence with the first response scale can further qualify that judgment to indicate on the second response scale the relative strength of that perception of influence. For example, a hypothetical item on the FTS reads, "If this situation occurred, there would be _____ outcomes." After indicating the direction and magnitude of one's preference in part "a" on a scale ranging from "very negative" to "very positive," respondents are asked to indicate in part "b" how likely

this outcome is on the second rating scale ranging from “not at all” to “very.” Similarly, in response to the consequential item, “The possibility that this situation could occur gives me _____,” respondents choose from options on a 7-point direction-by-magnitude scale on part “a” ranging from “much grief” to “much comfort.” Then, they indicate how much they feel that way on a 4-point strength scale on part “b” ranging from “not at all” to “very much.”

The strength rating scale is included to accommodate the conditional nature of trust, such that the level of a trustor’s sentiment about influence is a condition of the intensity of that sentiment. Otherwise, direction-by-magnitude ratings of influence alone might misrepresent the true level of a trustor’s attitude. Therefore, the FTS includes a second rating scale for each item to tap the strength of each sentiment that qualifies the extent of one’s perceptions of influence.

Summary of the FTS’s Responses

The FTS is designed to assess trustor sentiments along all three dimensions of a trustor’s assessment of influence: direction, magnitude, and strength. Two rating scales are used to assess each trustor sentiment. The first scale combines the direction and magnitude of a trustor’s sentiments with simultaneous ratings on the perceived quality and significance of influence on a 7-point scale with options ranging from “very unfavorable” to “very favorable” perceptions. The second rating scale represents the strength of such perceptions on a 4-point scale with options ranging from “not at all” (i.e., weak perceptions) to “very much” (i.e., strong perceptions). Assessing the dimensions of a trustor’s attitude with multiple response scales helps the FTS to avoid biasing responses with valence-loaded text within the items. This allows respondents to indicate their perceptions of influence directly, which can facilitate more accurate interpretations of scores. By measuring all three dimensions, the FTS is better equipped than existing scales to assess variations in trust levels, providing a more complete and direct measure of the attitude.

The Structure of the FTS

As described above, incorporating all components and dimensions of trust enhances the representativeness of the FTS. However, the way in which the FTS is structured to incorporate all of these necessary aspects of trust contributes further to the meaningfulness of the scores obtained with the scale. The FTS is structured such that the three components of the attitude are measured with separate items and all three dimensions are assessed for each dimension. In addition, the dimensions of a trustor's thoughts, feelings, and behavioral intentions are rated independent of each other. As shown in Table 6, the FTS is structured according to a 3 (component) X 3 (dimension) model. As such, expectations of influence (i.e., trustor thoughts) are rated in terms of the predicted quality (i.e., direction) and significance (i.e., magnitude) of influence and the certainty of such predictions (i.e., strength). Similarly, one's openness to influence (i.e., trustor feelings) and inclinations toward influence (i.e., trustor behavioral intentions) also are rated in terms the direction, magnitude, and strength of the sentiment. By accounting for each component and each dimension of trust, the FTS is structured to estimate nine facets of trust, each represented in a different cell of the 3 X 3 model presented in Table 6. For example, the first facet is the direction of one's expectations, the second is the magnitude of one's expectations, and so on to the strength of a trustor's inclination toward influence. Each facet reflects a separate judgment that uniquely contributes to a trustor's assessment of influence. Taken together, these nine facets represent the full set of judgments comprising a trustor's assessment of influence in a given situation (i.e., trust).

Given this 3 x 3 structure, the FTS can be scored in a way that estimates levels of trust more precisely than existing trust scales. Because each component and dimension of trust pertains to a unique aspect of the attitude, the nine component-by-dimension facets represent

independent judgments within a trustor’s attitude about influence. The level of trust might be different if only one of the nine cells changed. In this way, the FTS is sensitive enough to capture and differentiate among subtle variations in levels of trust. This is useful for studying predictors and outcomes of trust. For example, research on the relationship between job satisfaction and job performance suggests that by measuring both the cognitive and the affective components of job satisfaction separately, one has a better opportunity to detect the effects of employee satisfaction on performance (Schleicher & Watt, 2000). By including nine independent facets of trust, the FTS is equipped to provide enough specificity to interpret precisely how various factors are related to trust.

Table 6
Component-By-Dimension Facets of Trust

COMPONENT-BY-DIMENSION FACETS OF TRUST				
		Components of Trust		
		<u>Cognitive</u> <i>expectation of influence</i>	<u>Affective</u> <i>openness to influence</i>	<u>Behavioral</u> <i>inclination toward influence</i>
Dimensions of Trust	<u>Direction</u> <i>perceived quality of influence</i>	1 sign of predicted outcome from influence (negative-neutral-positive)	2 sign of perceived consequences of influence (negative-neutral-positive)	3 sign of inclined affect on influence (negative-neutral-positive)
	<u>Magnitude</u> <i>perceived significance of influence</i>	4 extent of predicted impact from influence (small-medium-large)	5 extent of perceived consequences of influence (small-medium-large)	6 extent of inclined affect on influence (small-medium-large)
	<u>Strength</u> <i>intensity of sentiments</i>	7 extent of expectation (low-moderate-high)	8 extent of openness (low-moderate-high)	9 extent of preference (low-moderate-high)

The scoring procedure of the FTS combines ratings from all nine facets in a way that enhances the interpretability and usefulness of its scores. A scoring key is attached as Appendix E. Specifically, the FTS produces a single trust score that reflects a functional combination of all

nine facets of the attitude. FTS scores are calculated in four steps. In the first step, each response option is coded quantitatively. Part “a” of each item reflects a trustor’s perceptions of the quality and significance of influence on a 7-point scale ranging from -3 (very unfavorable perception), through zero (neutral perception), to 3 (very favorable perceptions). The 4-point strength response scale in part “b” of each item qualifies each perception given in part “a” in terms of the extent to which a trustor maintains the perception on a scale ranging from zero (“not at all”) to 1.75 (“very/very much”).

The second step in scoring the FTS combining the scores for parts “a” and “b” of each item. The response selected on the direction-by-magnitude scale in part “a” of each item is multiplied with the response selected on the strength scale in part “b” of that item. Multiplying across the dimensions of each sentiment is necessary because they interact to determine the overall level of trust. Specifically, complete trust occurs only with the strongest, most favorable assessments of influence in all three components of the attitude. Anything less in even one of the three dimensions ultimately lowers the level of the attitude. That is, the extent to which a highly favorable perception of influence might indicate high trust, for example, is dependent upon the strength of such perception. A weak sentiment reduces the extent to which a favorable perception might indicate trust, whereas a strong perception increases the extent to which an unfavorable perception might indicate distrust. Therefore, the product of all three dimensions is calculated to account for subtle variations in trust levels. This scoring method is advantageous because different responses may not receive the same score. Every possible combination of a-b responses on a given item receives a different score, which can range from -5.25 (highly unfavorable) to 5.25 (highly favorable). For example, a highly favorable response on part “a”(scored as 3) of an item with moderate strength on part “b” (scored as 1.50). Overall, this

item receives a score of 4.50, and is saying, “I am moderately certain that the influence will be highly favorable.” This is a very different response than the reverse scenario in which one indicates a moderately favorable response on part “a” (scored as 2) with much strength on part “b” (scored as 1.75). This response receives a score of 3.50 and says, “I am very certain that the influence will be moderately favorable.” By multiplying across the dimensions of each item, different responses are assigned different scores. In addition, these scores can be mapped onto the trust/distrust continuum shown in Figure 4 in the appropriate order. Specifically, more favorable perceptions always are scored higher than less favorable ones, and the difference between more and less favorable perceptions is their relative strength.

The third step is to compute component sub-scores and an overall trust score from the individual item scores. There are 3 component sub-scores (i.e., Hypothetical, Consequential, and Motivational) to reflect the three sentiments about influence in a given situation (i.e., expectations, openness, and inclinations). Each component sub-score is the sum of the component items, and overall trust is the sum of scores across components. FTS sub-scores reflect the levels of each trustor sentiment in a given situation, and the composite score reflects the level of one’s trust. As such, a single score is produced that accounts for all nine elements of the 3 (component) X 3 (dimension) structure of trust.

To illustrate the advantages of this structure, it is helpful to compare it to simple trust measures that simply ask individuals to indicate their “trust.” Although direct, a simple trust measure does not specify the judgments that comprise the attitude. For example, two trustors might report exactly the same level of trust, but their scores may reflect a very different combination of sentiments about influence. Perhaps one trustor has moderately positive expectations and feelings and only neutral preferences about influence, whereas the other trustor

has relatively strong feelings and preferences, but weak expectations of influence. By assessing trust in terms of its nine facets, on the other hand, the FTS identifies the judgments underlying any given level of trust. This is particularly important to research on the development of trust, such that attempts to build trust often require specified knowledge about what judgments comprise it, and by extension, what judgments to focus on enhancing (Tway, 1994). This is useful for comparing trust levels across situations and for interpreting their similarities and differences. While simple trust scales might be useful in quickly identifying the placement of a trustor's attitude along the trust/distrust continuum, the FTS is structured and scored to also identify the judgments underlying any given score.

The Advantages of the FTS

Despite the large number of existing trust scales, none are based on a complete and appropriate definition of trust. Given deficits in their conceptual basis, the applicability and representativeness of existing trust scales are limited. To overcome the various limitations associated with existing trust scales, the FTS was constructed rationally based on a comprehensive definition of trust that accommodates all of its necessary characteristics. As such, there are four major advantages of the FTS over existing trust scales. First, the FTS provides a more direct measure of the focal construct than existing scales in terms of focusing on trustor thoughts, feelings, and behavioral intentions in reference to influence in a given situation. Second, the FTS is more broadly applicable than existing measures with the use of user-imposed frames of reference. Third, the FTS contains items and rating scales to tap all necessary components and dimensions of the attitude to offer a more complete measure of trust than currently exists. Finally, the structure of the FTS taps nine facets of trust independently, thereby enhancing the precision with which trust scores may be interpreted. Given these advantages, the

FTS is offered as a tool that may help researchers and practitioners improve the measurement and study of trust in a variety of endeavors.

Table 7 compares the FTS to other trust scales in terms of the theoretical appropriateness of their focus, content, response scales, and scoring. Because the FTS was rationally constructed to do so, it attempts to explicitly address each of the defining characteristics. In comparison, other trust scales typically exclude necessary components and dimensions of the attitude or focus only indirectly on trust through potentially inaccurate assumptions about related constructs.

Table 7
 Evaluation and Comparison of Trust Measures

EVALUATION & COMPARISON OF TRUST MEASURES											
<u>Measures of Trust</u>	<u>Construct Focus</u>				<u>Item Content</u>			<u>Response Format</u>			<u>Score Structure</u>
	<i>focuses on attitude directly</i>	<i>sets influence as object of ratings</i>	<i>applies to any target or context</i>	<i>assumes subjective desirability</i>	<i>solicits trustor thoughts</i>	<i>solicits trustor feelings</i>	<i>solicits trustor intentions</i>	<i>captures perceived direction</i>	<i>captures perceived magnitude</i>	<i>captures strength of perceptions</i>	<i>interprets all possible trust variations</i>
Functional Trust Scale	√	√	√	√	√	√	√	√	√	√	√
Butler ('91) Conditions of Trust Inventory					√			√	√		
Clark & Payne ('97) Trust Questionnaire	√		√		√	√	√	√	√		
Couch, Adams, & Jones ('96) Partner/Generalized Trust Scales					√	√		√		√	
Cook & Wall ('80) Trust at Work Scale					√	√		√		√	
Cummings & Bromiley ('96) Organizational Trust Inventory	√				√	√	√	√		√	
Currall & Judge ('95) Boundary Spanner Trust Scale	√						√			√	
Johnson-George & Swap ('92) Specific Interpersonal Trust Scale							√	√		√	
Mayer & Davis ('99)	√	√		√			√	√		√	
McAllister ('95) Cognition- & Affect-Based Trust	√				√	√		√		√	
Rotter ('67, '80) Interpersonal Trust Scale					√			√		√	
Single-item "trust" scales	√		√	√				√	√	√	

Note. This table does not represent an exhaustive list of existing trust scales. Only recent and/or widely used scales are included. Checks indicate that a measure incorporates the given aspect of trust, all of which are intended to contribute to a meaningful measure of the construct.

STUDY PURPOSE

Having developed a comprehensive definition of trust and rationally constructed an instrument to operationalize it (i.e., the FTS), a study was conducted to apply the FTS and assess its psychometric properties. The purpose of this study was to empirically refine the FTS scales and to provide initial evidence of their applicability and representativeness. Specifically, the FTS's structure was examined by comparing the 3 (component) X 3 (dimension) design of the FTS to 14 alternate structures, which were constructed a priori to represent variations in the inclusion and composition of components and dimensions (details are provided below). The robustness of the FTS also was addressed by applying the FTS in two situations to determine if the 3 X 3 structure is appropriate for assessing trust in different situations. Additionally, the reliability and validity of the FTS were examined to estimate its usefulness as a representative measure of "trust." The empirical methods and results of this study are presented in the following section.

METHOD

Research Materials and Procedures

Participants

Data were collected from 1076 participants, who were recruited from undergraduate psychology classes at a large, southeastern university in exchange for course extra credit. Data from 26 participants were eliminated from the study due to missing data and/or repeated participation. The remaining 1050 participants comprised two separate samples. Sample A consisted of 552 undergraduate students (72% female and 28% male) who were employed (other than self-employment) during the time of the study. The average age in Sample A was 20.29 ($SD = 3.35$). Sample B consisted of 498 undergraduate students (67% female and 33% male). The average age in Sample B was 20.24 ($SD = 3.32$). Students in both samples represented a wide variety of different college majors. There were no significant differences in age [$F(1, 1047) = .05, ns$] or G.P.A. [$F(1, 1042) = .09, ns$] between the two samples.

Measures

Functional Trust Scale (FTS). The FTS was rationally constructed with 15 items to measure trust based on the three proposed components of a trustor's attitude. The Hypothetical component (HYP) contained 5 items representing a trustor's expectations of influence in terms of one's thoughts about the potential outcomes of a given situation. The Consequential component (CON) contained 5 items representing a trustor's openness to influence in a given situation in terms of one's feelings about the risks and opportunities of a given situation. The Motivational component (MOT) contained 5 items representing one's preferred exposure to influence in a given situation in terms of one's behavioral intentions to affect the situation. Each proposed component consists of five items, and FTS scores represent a composite of the 15 items

across the proposed components. Each item has two parts, “a” and “b.” Part “a” of each item was designed to simultaneously assess a trustor’s perceptions of the quality and significance of influence in a given situation (i.e., the direction and magnitude dimensions of trust, respectively). For example, part “a” on one of the items reads “If my supervisor could change my pay, there would be a ___ result.” For part “a” of each item, responses range on a 7-point scale from -3 (very bad), through zero (neither good nor bad), to 3 (very good). Part “b” of each item was designed to assess the extent of such perceptions (i.e., the strength dimension of trust). For example, part “b” to the above item asks, “How sure are you?” Responses on part “b” of each item range on a 4-point scale from zero (not at all) to 1.75 (very). The anchors of each item’s response scales differ based on the item’s wording, but all were based on the same dimensions and coding system (i.e., direction X magnitude X strength).

Two different forms of the FTS were used in this study, which differed in the frame of reference of trust. On Form A (attached as Appendix F), the frame of reference defined influence within an employment situation as follows: “Suppose that your immediate supervisor could change your pay.” In this situation, one’s immediate supervisor was the target, and pay was the context of trust. On Form B (attached as Appendix G), the frame of reference defined influence within an academic situation as follows: “Suppose that your classmates could assign your grades.” In this situation, one’s classmates are the targets of trust, and grades are the context. The target of these two situations differed in that Form A pertained to trust in a hierarchical relationship (i.e., supervisor-subordinate), and Form B pertained to a peer relationship (i.e., student-student). These two situations were comparable in that the context pertained to the potential of influence on a basic outcome (pay or grade) of the given situation

(work or school). On both forms of the FTS, items were presented in random order across the three components, so participants could consider each item individually.

Overall Trust Measure (OTM). A three-item measure of overall trust (OTM) was constructed for this study to correspond to the conceptual trust/distrust continuum shown in Figure 4. Respondents indicated how much they trust a given target in a given context on a 7-point scale ranging from -3 (completely distrust), through ambivalence (neither trust nor distrust), to 3 (completely trust). Two forms of the OTM were used in this study. Form A corresponded to the employment situation of influence established in Form A of the FTS, and Form B corresponded to the academic situation of influence established in Form B of the FTS. Both forms are presented in Appendix H.

Perceived Target Ability (PTA). Perceptions of target ability (PTA) were measured in the current study as a potential correlate to trust (Butler, 1991; Butler & Cantrell, 1984; Currall, 1992; McAllister, 1995; Mayer & Davis, 1999). Mayer and Davis's measure of perceived target ability was used (see Appendix I), which contains six items pertaining to perceptions of another's competence in a given situation. Respondents indicated their agreement on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree) to statements such as "Target is very concerned about my welfare." Two forms were used in this study to measure PTA, which differed in their defined target. The target was one's immediate supervisor on Form A and one's classmates on Form B, corresponding to the targets defined on Forms A and B of the FTS.

Perceived Target Benevolence (PTB). Perceptions of target benevolence (PTB) were measured in the current study as a potential correlate to trust (Burt & Knez, 1996; Butler, 1991; Butler & Cantrell, 1984; Currall, 1992; Mayer & Davis, 1999). Mayer and Davis's measure of perceived target benevolence was used (see Appendix I), which consists of five items that tap

perceptions of another's motivation and concern about one's welfare. Respondents indicated their level of agreement on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree) to statements such as "Target is very concerned about my welfare." Two forms were used in this study to measure PTB, which differed in terms of their defined target. The target was one's immediate supervisor on Form A and one's classmates on Form B, corresponding to the targets defined on Forms A and B of the FTS.

Perceived Target Integrity (PTI). Perceptions of target integrity (PTI) were measured in the current study as a potential correlate to trust (Butler, 1991; Butler & Cantrell, 1984; Johnson-George & Swap, 1982; Mayer & Davis, 1999). Mayer and Davis's measure of perceived target integrity was used in the current study (see Appendix I), which consists of five items about perceptions of another's loyalty, reliability, and fairness. Respondents indicated their level of agreement on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree) to statements such as "Target tries hard to be fair in dealings with others." Two forms were used in this study to measure PTI, which differed in their defined targets. The target was one's immediate supervisor on Form A and one's classmates on Form B, corresponding to the targets defined on Forms A and B of the FTS.

Target-Specific Trust (TST). Johnson-George and Swap's (1982) Specific Interpersonal Trust Scale is a widely used measure of trust (Bigley & Pearce, 1998; attached as Appendix J), which was designed to measure trust toward a specified target (no context specification). This target-specific trust (TST) scale was used in the current study as a potential correlate to the FTS. This measure of TST contains nine items, such as "If we decided to meet somewhere for lunch, I would be certain that target would be there." Respondents indicated their level of agreement with such statements on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

This rating scale was adapted from a 9-point scale for consistency with other measures in the current study. Two forms were used in this study to measure TST, which differed in their defined targets. The target was one's immediate supervisor on Form A and one's classmates on Form B, corresponding to the targets defined on Forms A and B of the FTS.

General Trustingness (GTR). General trustingness is an individual's general tendency to be trusting of others, which is considered a personality trait that reflects one's propensity to trust across situations (Rotter, 1967). General trustingness is measured in this study as a potential correlate to trust (Couch et al., 1996; Scott, 1980; Mayer & Davis, 1999). The general trustingness scale (GTR) from Goldberg's (1999) International Personality Item Pool was used to measure general trustingness (attached as Appendix K). This GTR measured consisted of 10 items, such as "I trust others," to which respondents indicated their level of agreement on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Achievement Striving (AS). Achievement striving is a personality trait pertaining to an individual's general need for success (Spence, Helmreich, & Pred, 1987). The achievement striving (AS) scale from Goldberg's (1999) International Personality Item Pool was used (attached as Appendix L). This AS measure consisted of items, such as "I am highly motivated to succeed." Respondents indicated their level of agreement on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Extroversion (EXT). Extroversion is a personality trait regarding the extent to which an individual is outgoing in social situations. Extroversion (EXT) was measured in the current study with the gregariousness component of Goldberg's International Personality Item Pool extroversion scale (attached as Appendix M). This EXT measure consisted of 10 items, such as

“I prefer to be alone.” Respondents indicated their preferences for social interaction on a 5-point, Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Demographics. Demographic data were collected in the current study, including participants’ age, sex, G.P.A., year in college, major, employment status, and tenure in current job. In addition, participants indicated their familiarity with the targets of trust (i.e., immediate manager and classmates) as well as their experience with the context of trust in this study (i.e., pay changes and grade assignments). The demographic questionnaire used in the current study is attached as Appendix N.

Procedure

Participants completed a survey containing the measures described above, and they were advised that the survey assessed the nature of working relationships. Responses were confidential, and completion of the survey served as individuals’ informed consent to participate in the study. Each completed survey was coded with the last five digits of the respondent’s Social Security number and the course number of the class from which the respondent was recruited. This information was used to allocate extra credit points and to identify any duplicate surveys from the same individual. Individual respondents were not linked to their responses.

Two surveys were constructed for this study: Survey A and Survey B. The two surveys were administered concurrently in a between-subjects design and differed only in which Form of the situation-specific measures (i.e., FTS, OTM, PTA, PTB, PTI, and TST) were included. That is, Survey A contained Form A (i.e., work frame of reference) of the measures described above and was administered to the employed students in Sample A. Survey B contained Form B (i.e., academic frame of reference) of the measures described above and was administered to students

in Sample B. Both surveys contained the same versions of the personality measures (i.e., GTR, AS, EXT) and the demographics questionnaire.

In addition to the demographics questionnaire, both surveys contained three sections based on the focus of the measures: (1) self-directed measures, (2) target-directed measures, and (3) target/context-directed measures. The self-directed section included the personality measures described above (i.e., GTR, AS, and EXT). The target-directed section included the measures regarding perceptions of a given target only (i.e., PTA, PTB, PTI, and TST). The target/context-directed section contained measures regarding perceptions of a given target within a given context (i.e., FTS and OTM). The sections of the surveys were completely counterbalanced (Gaito, 1961; Greenwald, 1976; Leary, 1991), with the exception of the demographics questionnaire, which remained the last element of all surveys. There were no observed differences based on the order of measures. The counterbalancing resulted in six versions of the survey as follows:

- Version 1: self-directed, target-directed, target/context-directed
- Version 2: self-directed, target/context-directed, target-directed
- Version 3: target-directed, self-directed, target/context-directed
- Version 4: target-directed, target/context-directed, self-directed
- Version 5: target/context-directed, self-directed, target-directed
- Version 6: target/context-directed, target-directed, self-directed

The survey was administered in a 2 (form) X 6 (version), between-subjects design. Participants were assigned to one of the two samples based on their employment status, whereas participants were randomly assigned to one of the six versions of each form. The sample sizes and gender makeup for each cell of this design are presented in Table 11. There were no

significant differences across the 12 cells based on participants' age [$F(11, 1047) = .43, ns$], sex [$F(11, 1048) = 1.11, ns$], or G.P.A. [$F(11, 1042) = .72, ns$].

Table 11
Samples in 2 X 6 Between-Subjects Design

	Sample A - Work Situation (N = 552)		Sample B - Academic Situation (N = 498)	
	<u>Sample Size</u>	<u>Distribution</u>	<u>Sample Size</u>	<u>Distribution</u>
<u>Version 1</u>	n = 95	72% female 28% male	n = 82	62% female 38% male
<u>Version 2</u>	n = 93	75% female 25% male	n = 85	67% female 33% male
<u>Version 3</u>	n = 92	72% female 28% male	n = 84	62% female 38% male
<u>Version 4</u>	n = 95	74% female 26% male	n = 86	63% female 37% male
<u>Version 5</u>	n = 90	72% female 28% male	n = 84	73% female 27% male
<u>Version 6</u>	n = 87	69% female 31% male	n = 78	76% female 24% male

RESULTS

The Structure of the FTS

Recall that the FTS was constructed in a 3 (component) X 3 (dimension) design to assess trustor thoughts, feelings, and behavioral intentions (i.e., components) in terms of the direction, magnitude, and strength (i.e., dimensions) of each sentiment. To assess the structure of the FTS and further refine its scales, confirmatory factor analyses (CFAs) were conducted using LISREL 8.30 to identify the most appropriate FTS measurement model given the data collected in this study. The data from Sample A (i.e., work situation) were used to examine and refine the FTS structure, and data from Sample B (i.e., academic situation) were used to assess the robustness of the resulting factor structure of the FTS to a different situation.

The FTS Measurement Models

To assess the appropriateness of the FTS's 3 X 3 structure, 15 different measurement models were examined and compared. The different measurement models varied along two features. First, to assess the appropriateness of the three-component design (i.e., Hypothetical-HYP, Consequential-CON, and Motivational-MOT), five factor structures were constructed and examined, which differed in the number and composition of their latent factors. Second, to assess the appropriateness of the three-dimensional perceptions (i.e., direction, magnitude, and strength), the five structures were assessed using data generated from three scoring methods, which differed in terms of which perception dimensions were included. Table 12 presents the 15 different measurement models assessed in the current study based on the variations in their factor structures and scoring methods. These models were constructed a priori based on the structure of previous trust scales and consideration for alternate explanations of trust. These models are discussed below.

Table 12
FTS Measurement Models

		<u>Variations in FTS Factors (Components)</u>				
		<u>Hypothesized 1</u> <u>HYP - CON - MOT</u>	<u>Alternate 2</u> <u>HYPCON - MOT</u>	<u>Alternate 3</u> <u>HYP - CONMOT</u>	<u>Alternate 4</u> <u>HYPMOT - CON</u>	<u>Alternate 5</u> <u>HYPCONMOT</u>
<u>Variations in FTS Scoring</u> <u>(Dimensions)</u>	<u>Hypothesized X</u> direction magnitude strength	Model 1X	Model 2X	Model 3X	Model 4X	Model 5X
	<u>Alternate Y</u> direction magnitude	Model 1Y	Model 2Y	Model 3Y	Model 4Y	Model 5Y
	<u>Alternate Z</u> direction strength	Model 1Z	Model 2Z	Model 3Z	Model 4Z	Model 5Z

Variations of the FTS factor structure consisted of five nested measurement models: the Hypothesized and four Alternate structures. The Hypothesized 1 model contains three factors (HYP - CON - MOT), based on this paper’s theory that a trustor’s attitude consists of three components: the Hypothetical (HYP), Consequential (CON), and Motivational (MOT) components of trust. The Alternate 2 model reflects two-factor models (HYPCON - MOT) for which the Hypothetical and Consequential variables were collapsed into a single factor given research that suggests that a trustor’s thoughts and feelings overlap to the point of being possibly indistinguishable (Clark & Payne, 1997; Cummings & Bromiley, 1996). The Alternate 3 model consists of two factors (HYP - CONMOT) by collapsing the Consequential and Motivational variables into a single factor, which is based on Mayer et al.’s (1995) suggestion that a trustor’s perceptions of risk are conceptually linked to one’s behavioral motivations. The Alternate 4 model has two factors (HYPMOT - CON) in which the Hypothetical and Motivational variables were combined to determine if a trustor’s expectations and behavioral motivation are explained by the same factor. The Alternate 5 model contains one factor (HYPCONMOT) in which all variables were collapsed to determine if all FTS items explain a single, latent factor.

Variation of the FTS scoring method consisted of three different combinations of perception dimensions. The Hypothesized X scoring consisted of three-dimensional perceptions, which is consistent with this paper's theory that levels of trust are determined by the direction, magnitude, and strength of trustors' perceptions of influence. Alternate scoring methods also were included in the current study in an attempt to compare the fit of measurement models to three-dimensional trustor responses versus the types of two-dimensional responses that are common among existing trust scales. The Alternate Y scoring method included only the direction and magnitude of trustor sentiments, which is consistent with existing trust scales that assess trust in terms of perceptions of the favorability of a given frame of reference (e.g., Butler, 1991; Clark & Payne, 1997; Cook & Wall, 1980). Specifically, the Alternate Y scoring method includes only perceptions of the quality and significance of influence, and excludes the strength of such perceptions. The Alternate Z scoring method included only the direction and strength responses, which is consistent with existing trust scales focus only on intensity with which a given frame of reference is considered favorable or unfavorable (e.g., Currall & Judge, 1995; McAllister, 1995; Rotter, 1967, 1980). Specifically, the Alternate Z scoring method includes perceptions of the quality of influence and the extent to which this perception exists, but excludes perceptions of the size of the impact from influence on one's outcomes in a give situation (i.e., the magnitude dimension).

The five nested measurement models described above were assessed and compared using data from each of these three scoring methods, resulting in the 15 models shown in Table 12. Model 1X is the hypothesized model in the current study, such that it was designed to assess the fit of a three-factor model to the three-dimensional FTS data. Before presenting the results of these models, the metrics used to assess the fit of the measurement models are discussed.

Goodness-of-Fit Criteria

Although LISREL output provides many different fit indices for researchers to judge the adequacy of model fit, no consensus currently exists among researchers on which index (or set of indices) provides the most accurate or appropriate assessment of model fit (Vandenberg & Lance, 2000). However, Hu and Bentler (1993) provide some guidance by separating fit indices into two broad categories: absolute and comparative fit indices. Absolute fit indices reflect the overall adequacy of fit of a given measurement model that should be interpreted to determine the extent to which a given model fits the data, whereas comparative fit indices reflect the fit of a given model in relation to some alternate model and should be interpreted in terms of a comparison between models (Bollen, 1989; Byrne, 1998). Based on Vandenberg and Lance's recommendations, both types of fit indices were considered in this study. The specific metrics used to assess each type of fit are described below.

Absolute Fit. Consistent with Vandenberg and Lance's (2000) recommendations, three indices were used to assess the absolute fit of the measurement models tested in the current study. First, the Root Mean Squared Error of Approximation (RMSEA) metric assesses the extent to which a model would fit the population data if it were available (Byrne, 1998), such that RMSEA values of less than or equal to .08 reflect adequately fitting models (McCallum, Browne, & Sugawara, 1996). Second, the Standardized Root Mean Squared (SRMR) metric assesses model fit in terms of the average amount of error the model has in explaining the data, such that SRMR values less than or equal to .05 reflect adequate fit (Byrne, 1998). Third, the chi-squared statistic (χ^2) also was used as an absolute fit index to assess model fit. Although the chi-squared statistic technically assesses the statistical significance of the model, the chi-squared value often is inflated by sample size and model complexity (Schumaker & Lomax, 1996). To

avoid inaccurate conclusions about model fit based on an inflated statistic, Jöreskog and Sörbom (1989) suggest that it is necessary to consider the chi-squared statistic in relation to the degrees of freedom (df) of the model. Specifically, they recommend that the chi-squared statistic of adequately fitting models should not be too large in relation to the degrees of freedom associated with it. Carmines and McIver (1981) suggest that the chi-squared-to-degrees of freedom ratio (χ^2/df) should not exceed 3:1 for adequately fitting models. Based on these recommendations, adequacy of overall model fit was assessed based on the following criteria: RMSEA values of less than or equal to .08, (2) SRMR values of less than or equal to .05, and (3) chi-squared-to-degrees of freedom ratios (χ^2/df) of less than or equal to 3:1.

Comparative Fit. In addition to measures of absolute fit, three comparative fit indices were used in the current study to assess the fit of the Hypothesized Model in relation to alternate models. First, the change in chi-squared statistic ($\Delta\chi^2$) was used to determine the extent to which model fit is improved by an alternate nested model. Such comparisons were based on Jöreskog and Sörbom's (1989) suggestion that the standard for improved fit is that the chi-squared statistic be significantly reduced from one model to the next without a significant reduction in the degrees of freedom between the models. Second, the Adjusted Goodness of Fit Index (AGFI) was used in this study as a comparative fit index. Although traditionally classified as an absolute fit index, Bollen (1989) points out that the AGFI is a more meaningful indicator of fit when it is interpreted across alternate models than within a single model, such that comparing the AGFI of alternate models provides information about one model in relation to another in terms of which has the best fit given the difference in estimated parameters. Cole (1987) recommends that the AGFI criteria be .80 or higher for good fit. Third, Vandenberg and Lance (2000) recommend that the Comparative Fit Index (CFI) be used as a supplemental measure of

comparative fit. They suggest that the criteria for CFI values be greater than or equal to .90 for fit. Vandenberg and Lance found that increased CFI values of .02 or more suggest improvements in model fit. Therefore, the comparative fit of the alternate models tested in this study was determined based on the following criteria: (1) significant decreases in chi-squared based on the change in chi-squared statistic ($\Delta\chi^2$), (2) AGFI values greater than or equal to .80, and (3) CFI values greater than or equal to .90, with differences greater than .02 considered as improved fit. As suggested by Bollen (1989), model fit was assessed in the current study in terms of looking across all fit indices as a whole, such that adequately fitting models achieve an overall picture of fit, even if some of the fit indices do not meet their respective criteria.

First-Order CFA Results of the FTS Measurement Models

First-order CFAs were conducted on each measurement model using maximum likelihood (ML) estimation, which is appropriately applied when data are multivariate normal (Byrne, 1998; Schumaker & Lomax, 1996). Data in the current study were tested for multivariate normality using Mardia's PK statistic of multivariate kurtosis and skewness. The recommended criterion for multivariate normality is PK values less than three (Mardia, 1970; Romeu & Qzturk, 1993). All data in the current study met this criterion; the obtained PK values are presented in the tables below with each set of CFA results.

Hypothesized X Scoring Method. Table 13 presents the CFA results of the five factor structures using the Hypothesized Scoring method (i.e., Models 1X - 5X). Although the SRMR, AGFI, and CFI values indicate adequate fit of all five models, all RMSEA and χ^2/df values failed to meet their criteria for good fit, suggesting less than adequate fit. The Hypothesized Model 1X emerged as the best fitting model, such that the change in chi-squared ($\Delta\chi^2$) statistics indicate

that Model 1X resulted in significantly better fit to the three-dimensional data than each of the alternate models with less than three factors.

Table 13
First-Order CFA Results of FTS Models with the Hypothesized X Scoring Method

Model	Absolute Fit Indices					Comparative Fit Indices		
	RMSEA	SRMR	χ^2	df	χ^2/df	$\Delta\chi^2$	AGFI	CFI
Hypothesized Model 1X HYP - CON - MOT	.085	.035	400.67*	87	4.61	--	.87	.95
Model 2X HYPCON - MOT	.087	.034	434.55*	89	4.88	33.88 (2)*	.86	.95
Model 3X HYP - CONMOT	.100	.035	517.47*	89	5.81	116.80 (2)*	.84	.94
Model 4X HYPMOT - CON	.091	.037	453.76*	89	5.10	53.09 (2)*	.86	.95
Model 5X HYPCONMOT	.099	.036	523.03*	90	5.81	122.36 (3)*	.84	.94

* $p < .001$. All models were tested with data from the Hypothesized X scoring method, which reflects the direction, magnitude, and strength of perceptions. The data were multivariate normal ($PK = 1.50$, $p < .001$).

Alternate Y Scoring Method. Table 14 presents the CFA results for the five models (Models 1Y - 5Y) assessed with the Alternate Y scoring method that included only the perceived direction and magnitude of influence (perception strength was excluded). The results of this scoring method are similar to those of the Hypothesized X scoring method. The SRMR, AGFI, and CFI indices suggest adequate fit for all five models, but the RMSEA and χ^2/df ratios represent less than adequate fit. The $\Delta\chi^2$ statistics also indicate that The three-factor model (Model 1Y) resulted in significantly better fit than Models 2Y - 5Y. In comparison with the fit of Model 1X, the three-factor structure did not result in better to the two-dimensional data in Model 1Y (RMSEA = .089; SRMR = .032; $\chi^2/df = 5.00$; AGFI = .86; CFI = .95) than the three-dimensional data in the hypothesized Model 1X.(RMSEA = .085; SRMR = .035; $\chi^2/df = 4.61$; AGFI = .87; CFI = .95). As such, there was no evidence to suggest that the hypothesized three-factor, three-dimensional model (Model 1X) should be rejected in favor of the three-factor model

(Model 1Y) that includes only the perceived direction and magnitude of influence and excludes the strength of such perceptions.

Table 14
First-Order CFA Results of FTS Models with the Alternate Y Scoring Method

Model	Absolute Fit Indices					Comparative Fit Indices		
	RMSEA	SRMR	χ^2	df	χ^2/df	$\Delta\chi^2$	AGFI	CFI
Model 1Y HYP - CON - MOT	.089	.032	435.35*	87	5.00	--	.86	.95
Model 2Y HYPCON - MOT	.092	.031	462.67*	89	5.20	27.32 (2)*	.85	.95
Model 3Y HYP - CONMOT	.099	.033	528.44*	89	5.94	93.09 (2)*	.84	.94
Model 4Y HYPMOT - CON	.095	.035	491.40*	89	5.52	56.05 (2)*	.85	.94
Model 5Y HYPCONMOT	.100	.034	540.41*	90	6.00	105.06 (3)*	.83	.94

* $p < .001$. All models were tested with data generated from the Alternate Y scoring method, which reflects only the direction and magnitude of perceptions. The data were multivariate normal ($PK = 1.88$, $p < .001$).

Alternate Z Scoring Method. Table 15 presents the CFA results of the five factors structures (Models 1Z - 5Z) assessed with the Alternate Z scoring method, which included two-dimensional FTS responses: direction and strength (the perceived magnitude of influence was excluded). Consistent with the above results, the five models did not provide good fit, such that all RMSEA and χ^2/df values failed to meet their criteria. The $\Delta\chi^2$ statistics indicate that the Model 1Z resulted in significantly better fit than all of the alternate models except Model 2Z, which fit the data similarly to the three-factor model. However, neither Model 1Z (RMSEA = .088; SRMR = .035; $\chi^2/df = 4.90$; AGFI = .87; CFI = .95) nor Model 2Z (RMSEA = .087; SRMR = .035; $\chi^2/df = 4.95$; AGFI = .87; CFI = .95) resulted in better fit than the hypothesized Model 1X (RMSEA = .085; SRMR = .035; $\chi^2/df = 4.61$; AGFI = .87; CFI = .95). Therefore, there was no evidence to suggest that the hypothesized three-factor, three-dimensional model should be rejected in favor of either Alternate Z model that excludes the perceived magnitude of influence.

Furthermore, Model 1X is theoretically more appropriate, given that it reflects all facets of the 3 (component) X 3 (dimension) concept of trust.

Table 15
First-Order CFA Results of FTS Models with the Alternate Z Scoring Method

Model	Absolute Fit Indices					Comparative Fit Indices		
	RMSEA	SRMR	χ^2	df	χ^2/df	$\Delta\chi^2$	AGFI	CFI
Model 1Z HYP - CON - MOT	.088	.035	426.23*	87	4.90	--	.87	.95
Model 2Z HYPCON - MOT	.087	.035	431.18*	89	4.84	4.95 (2)	.87	.95
Model 3Z HYP - CONMOT	.090	.035	451.68*	89	5.08	25.45 (2)*	.86	.95
Model 4Z HYPMOT - CON	.089	.036	444.03*	89	4.99	17.80 (2)*	.87	.95
Model 5Z HYPCONMOT	.089	.036	454.53*	90	5.05	28.30 (3)*	.87	.95

* $p < .001$. All models were tested with data generated from the Alternate Z scoring method, which consisted of direction and strength responses. The data were multivariate normal ($PK = 1.88$, $p < .001$).

FTS Refinement and Model Modification. When deciding about the appropriateness of a model based on the overall picture of fit, one might conclude that some of the models assessed above (particularly the three-factor models) resulted in adequate fit. However, the fact that the RMSEA and χ^2/df indices of overall fit consistently failed to meet their criteria suggests that overall fit might be improved with further scale refinement. Specifically, Byrne (1998) points out that modifying a model by identifying and eliminating items that contribute to model misfit constitutes an exploratory, scale development approach that is worthwhile for improving fit. Because the purpose of this study includes scale development, model modification was conducted in an effort to improve fit through further refinement of the FTS scales.

Model 1X was selected for modification for three reasons. First, the results presented above indicate that the three-factor structure was significantly better fitting (or in the case of Model 2Z, no worse fitting) than the alternate structures for all three sets of FTS data. Second, dropping the strength and magnitude dimensions did not improve the fit of the three-factor

structure; actually, fit to the three-dimensional data could be argued to be slightly better than fit to either set of two-dimensional data. Finally, and most importantly, Model 1X is the most theoretically appropriate model based on the conceptualization of trust presented in the previous section. For these reasons, Model 1X was deemed the most appropriate for modification and further examination.

Model modification proceeded in a systematic process of scale refinement. Starting with the LISREL output for Model 1X, the modification indices of the model were examined to identify the element of the model that was the largest contributor to model misfit (Byrne, 1998; Jöreskog & Sörbom, 1989; Schumacker & Lomax, 1996). The item that was identified as the largest potential contributor to misfit was eliminated from the FTS scales, and the model was modified accordingly and reassessed for fit. This process continued one item at a time until fit was improved without compromising the measurement of the construct and the potential for further improvements no longer existed. In every case, the modification indices indicated that the largest sources of misfit were items that cross-loaded strongly onto more than one latent factor and/or shared error variance with other items. The decision to eliminate such items was based on Byrne's caution that model modifications should be theoretically and practically meaningful and not just about achieving fit.

Table 16 presents the results of this process of model modification through refinements in the FTS items. As shown in Table 16, six items were eliminated from the model. Specifically, all fit indices met their criteria after the sixth misfitting item was eliminated from the model (RMSEA = .052; SRMR = .018; $\chi^2/df = 2.53$; AGFI = .96; CFI = .99). Furthermore, the CFI value in the final step (.99) is .02 greater than the third step (.97), which suggests that fit has been substantially improved (Vandenberg & Lance, 2000). As such, it was decided that further

modification was neither needed nor appropriate, such that there was little, if any, potential for improving the fit of the model (Byrne, 1998; Schumaker & Lomax, 1996). Therefore, the resulting model contained three latent factors (i.e., HYP, CON, and MOT) and three-dimensional scores (i.e., direction, magnitude, and strength). As such, the hypothesized three-factor, three-dimensional model was modified by reducing it from 15 to 9 items, with 3 items for each of the latent factors. The refined, 9-item FTS is presented in Appendix O.

Table 16
First-Order CFA Results of FTS Refinement and Model Modification

FTS Refinement		Absolute Fit					Comparative Fit	
<u>Number of Items</u>	<u>Eliminated Items</u>	<u>RMSEA</u>	<u>SRMR</u>	χ^2	<u>df</u>	χ^2/df	<u>AGFI</u>	<u>CFI</u>
15	none	.085	.035	400.70*	87	4.61	.87	.95
14	open11	.074	.030	287.99*	74	3.89	.90	.96
13	expect1	.069	.026	229.00*	62	3.69	.91	.97
12	open4	.067	.023	180.17*	51	3.53	.92	.98
11	expect10	.061	.022	127.65*	41	3.11	.94	.98
10	inclin15	.059	.021	108.91*	32	3.40	.94	.98
9	inclin6	.052	.018	60.75*	24	2.53	.96	.99

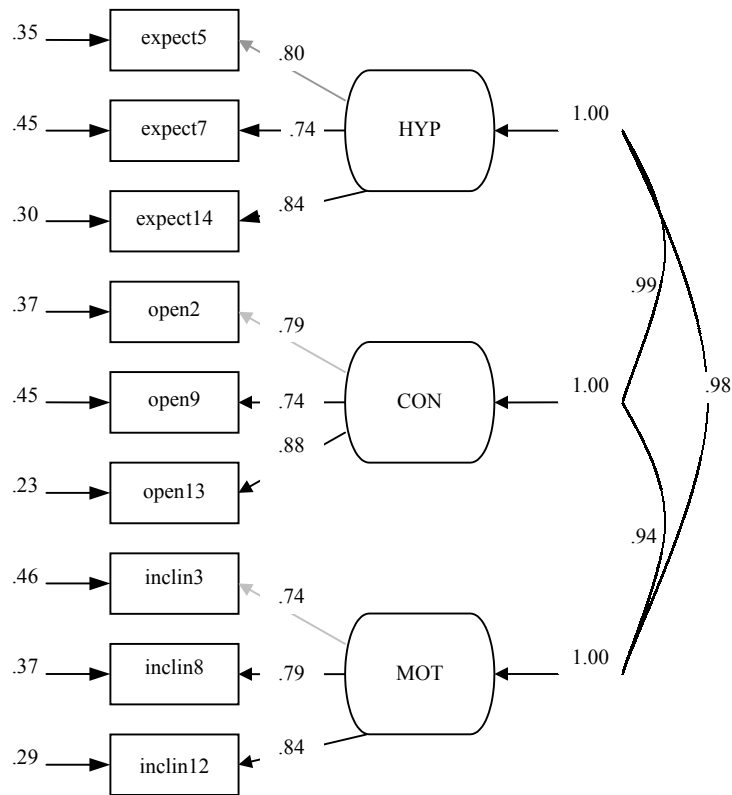
* $p < .001$. All models were tested with data generated from the Hypothesized X scoring method, which consisted of the direction, magnitude, and strength dimensions of assessments of influence. The data were multivariate normal ($PK = 1.57$, $p < .001$).

Having reduced the FTS from 15 to 9 items, the 15 measurement models were re-assessed for fit. The results are presented in Table 17. The Hypothesized Model 1X, three-factor, three-dimensional model emerged as the best fitting to the refined FTS (RMSEA = .052; SRMR = .018; $\chi^2/\text{df} = 2.53$; AGFI = .96; CFI = .99). Specifically, the three-factor model of the X and Y nested models achieved significantly better fit than those with less factors, and it achieved significantly better, or not significantly worse, fit than the alternates among the Z nested models. The overall picture of fit of the three-factor model fit better to the three-dimensional data (Model 1X) than the two-dimensional (Models 1Y and 1Z). These findings suggest that the hypothesized structure of the FTS is the most appropriate among the alternatives tested in the current study. This resulting model of the refined FTS is depicted in Figure 5.

Table 17
First-Order CFA Results of Refined FTS Measurement Models

Model	Absolute Fit Indices					Comparative Fit Indices		
	RMSEA	SRMR	χ^2	df	χ^2/df	$\Delta\chi^2$	AGFI	CFI
Hypothesized 1X HYP - CON - MOT	.052	.018	60.75	24	2.53	--	.96	.99
Model 2X HYPCON - MOT	.061	.021	80.11	26	3.08	19.36*	.95	.98
Model 3X HYP - CONMOT	.061	.021	80.21	26	3.09	19.46*	.95	.98
Model 4X HYPMOT - CON	.056	.020	71.57	26	2.75	10.82 [†]	.95	.99
Model 5X HYPCONMOT	.062	.022	84.45	27	3.13	23.70*	.94	.98
Model 1Y HYP - CON - MOT	.076	.021	96.86	24	4.01	--	.93	.98
Model 2Y HYPCON - MOT	.078	.022	109.18	26	4.20	12.92 [†]	.98	.98
Model 3Y HYP - CONMOT	.079	.023	112.09	26	4.31	15.83*	.92	.98
Model 4Y HYPMOT - CON	.076	.022	104.18	26	4.01	7.92 ^{††}	.92	.98
Model 5Y HYPCONMOT	.078	.023	114.10	27	4.23	17.84*	.93	.98
Model 1Z HYP - CON - MOT	.060	.019	73.87	24	3.08	--	.96	.98
Model 2Z HYPCON - MOT	.060	.020	79.83	26	3.07	5.96 ^{††}	.95	.98
Model 3Z HYP - CONMOT	.058	.020	79.34	26	3.01	4.47	.95	.98
Model 4Z HYPMOT - CON	.059	.019	76.80	26	2.95	2.93	.95	.98
Model 5Z HYPCONMOT	.058	.020	79.97	27	2.96	6.10 ^{††}	.95	.98

* $p < .001$. [†] $p < .01$. ^{††} $p < .05$. All data were multivariate normal ($PK_{X-Score} = 1.57$, $PK_{Y-Score} = 1.81$, $PK_{Z-Score} = 1.69$, $p < .001$).



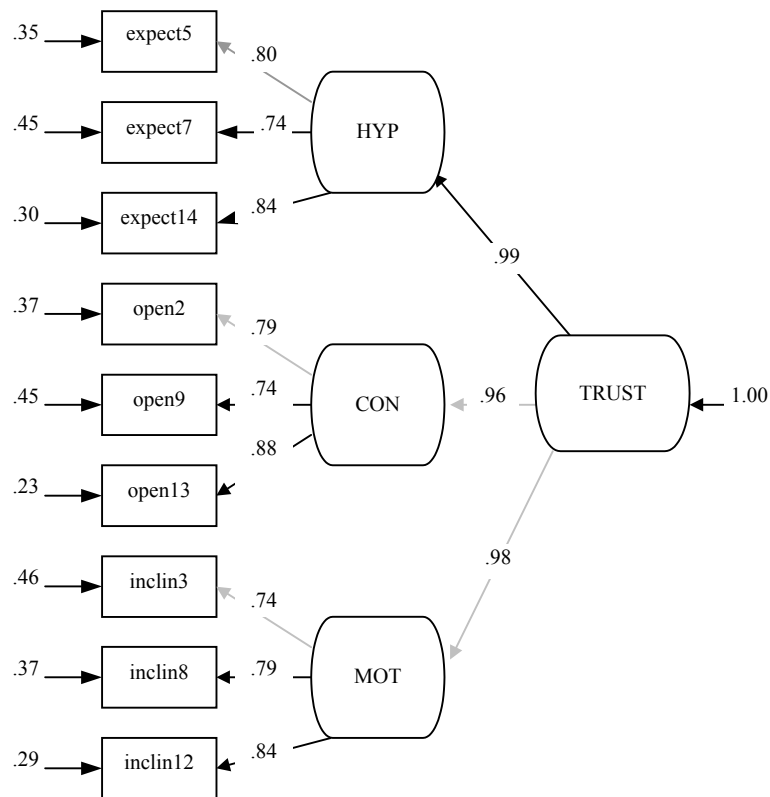
RMSEA = .052; SRMR = .018; $\chi^2 = 60.75$; $df = 25$; $\chi^2/df = 2.53$; AGFI = .96; CFI = .99
 All paths are significant, $p < .001$. 63% of variance in HYP explained by “expect” items.
 65% of variance in CON explained by “open” items. 63% of variance in MOT explained by “inclin” items.

Figure 5
Resulting First-Order Measurement Model of the FTS (Form A)

Second-Order CFA Results of the Resulting First-Order Model

A second-order CFA was conducted to determine if the three FTS scales (i.e., HYP, CON, and MOT) load on a higher-order construct (i.e., TRUST). However, having only three first-order factors, the second-order model would have been just-identified with zero degrees of freedom (i.e., untestable) unless an additional constraint was included in the model (Bentler, 1995). Byrne (1998) recommends constraining the paths from the higher-order factor to be equal to latent factors that have equivalent variances. Therefore, the second-order model was specified to constrain the paths to CON and MOT as equivalent, given that the variances of these two

factors were equivalent ($SD_{CON} = 1.84$; $SD_{MOT} = 1.83$; $F(551) = .99$, ns). This second-order model fit the data well (RMSEA = .052; SRMR = .018; $\chi^2/df = 2.49$; AGFI = .96; CFI = .99), suggesting that the three, FTS scales load onto a single, underlying construct (i.e., trust). The $\Delta\chi^2$ from the first-order model ($\chi^2 = 60.75$, $df = 24$) to this second-order model ($\chi^2 = 62.19$, $df = 26$) was not significant ($\Delta\chi^2(2) = 1.44$, ns). Figure 6 depicts this resulting second-order model.



RMSEA = .052; SRMR = .018; $\chi^2 = 62.19$; $df = 24$; $\chi^2/df = 2.49$; AGFI = .96; CFI = .99
 All paths are significant, $p < .001$. 63% of variance in HYP explained by “expect” items.
 65% of variance in CON explained by “open” items. 63% of variance in MOT explained by
 “inclin” items. 64% of variance in TRUST explained by all items. 98% of variance in
 TRUST explained by the first-order factors.

Figure 6
Resulting Second-Order Measurement Model of the FTS (Form A)

The Applicability of the FTS

Recall that the FTS was designed to be versatile in its application. Specifically, the FTS was intended to provide researchers with the ability to easily alter the instrument's frame of reference across different respondents (i.e., trustors) and different situations (i.e., targets and/or contexts) according to their particular research interests. As an initial assessment of the applicability of the FTS across situations, a second application of the FTS was used in the current study. The two FTS applications in the current study constituted two different forms with deliberately different frames of reference. Whereas Form A referred to a work situation ("if your immediate supervisor could change your pay") Form B referred to an academic situation ("if your fellow classmates could assign your grades"). Forms A and B of the FTS are shown in Appendices F and G, respectively. Both forms pertain to trustor perceptions about influence within the context of similar reward- or compensation-type situations (i.e., employees' pay and students' grades). However, they differed in their contextual frames of reference (i.e., pay versus grades). The two FTS applications also differed in that they were administered to independent samples of trustors (i.e., Samples A and B), and the trustor frame of reference differed in that the trustors' roles varied (i.e., employees versus students). The target frame of reference also differed between the two forms, such that Form A was targeted toward one's immediate supervisor and Form B was targeted toward one's classmates. Finally, the trustor-target relationship differed; Form A pertained to a hierarchical supervisor-subordinate relationship, whereas Form B referred to a peer relationship among fellow students.

The applicability of the FTS was assessed in the current study by examining the structural similarity of the two FTS forms. Specifically, multigroup CFAs were conducted to examine the conceptual equivalence of the two forms, which indicates the extent to which the two FTS

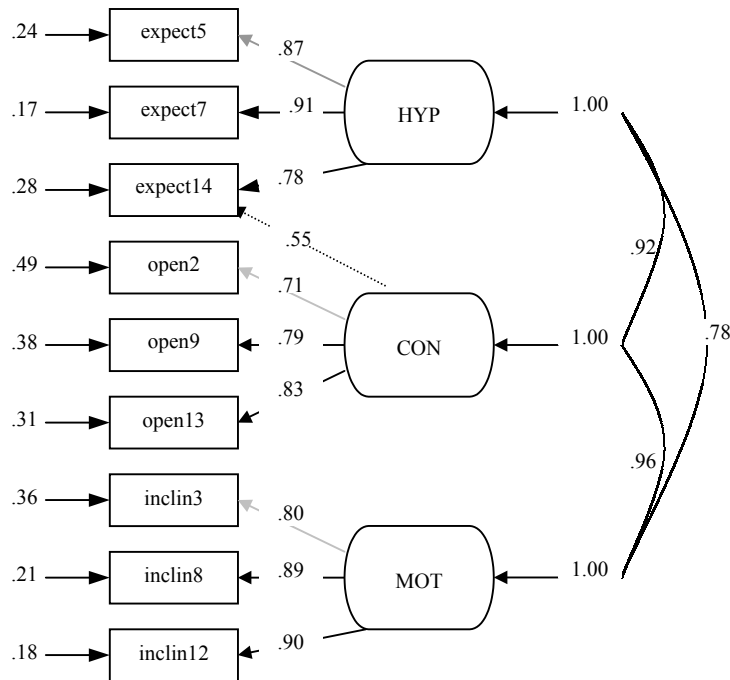
applications measure the same underlying construct (Vandenberg & Lance, 2000). As such, conceptual equivalence was estimated in the current study using multigroup CFAs to examine the extent to which the two forms fit the same factor structure.

The conceptual similarity of Forms A and B of the FTS was assessed by testing the configural and metric invariance of their measurement models (Vandenberg & Lance, 2000). Configural invariance occurs when both forms result in good fit to the same factor structure (i.e., same number of latent factors with items loading onto like factors), and metric invariance occurs when the factor loadings are the same for both forms. Cheung (1999) recommends assessing configural and metric invariance based on a hierarchically-ordered set of conditions. First, configural invariance is assessed by testing both models for fit simultaneously to determine if they share a common structure (aside from the known difference). If the configural invariance model results in adequate fit (i.e., equivalent factors), then metric invariance is assessed by restricting all factor loadings to be equal between the models to determine if corresponding factor loadings are the same. If the model of metric invariance is not significantly different from the model of configural invariance (as indicated by a non-significant change in chi-squared), the factor loadings also are equal, and the forms should be considered conceptually equivalent. However, if the model of metric invariance differs significantly from the model of configural invariance (significant change in chi-squared), then it is necessary to assess the variance of each factor loading separately in a series of more restrictive models to identify which factor loadings are invariant between the two forms. This process was conducted using multigroup CFA to assess both the first- and second-order equivalence of Forms A and B. The results of each are presented in the following sections.

First-Order Multigroup CFA Results

As a preliminary step to the multigroup CFAs, Form B was assessed for fit using the same models and procedures described above for Form A. Form B resulted in almost exactly the same results as Form A, such that none of the 14 alternate models resulted in better fit than the hypothetical Model 1X, but Model 1X did not achieve good fit. Scale refinement was conducted for Form B in the same manner as for Form A, and the same 6 items were identified and eliminated as sources of misfit. However, good fit was not achieved for Form B after eliminating the 6 items. The modification indices indicated that a seventh item on Form B (expect14) cross-loaded onto the HYP and CON factors, but eliminating the item did not improve fit. Rather, good fit on Form B only was achieved by allowing that seventh item to cross-load in the model. Doing so resulted in good fit for the hypothesized Model 1X (RMSEA = .061; SRMR = .021; $\chi^2/df = 2.72$; AGFI = .94; CFI = .99). The resulting first-order measurement model for Form B is presented in Figure 7.

Although the resulting models for Forms A and B were not identical given that Form B's model contains a cross-loading item, Byrne (1998) suggests that such minor structural differences are neither uncommon nor problematic if the multigroup comparison acknowledges the known discrepancy (i.e., the cross-loaded path). Although the cross-loading path was needed to achieve fit for Form B, but not Form A, Byrne also suggests that multigroup comparison is appropriate because the data from both forms of the FTS fit well to a model with the same basic items and factor content. Therefore, the resulting first-order models for Form A (Figure 5) and Form B (Figure 7) of the FTS were assessed for conceptual similarity in terms of their configural and metric invariance. The results are presented in Table 18.



RMSEA = .061; SRMR = .021; $\chi^2 = 62.49$; $df = 23$; $\chi^2/df = 2.72$; AGFI = .94; CFI = .99
 All paths are significant, $p < .001$. 73% of variance in HYP explained by “expect” items.
 61% of variance in CON explained by “open” items. 75% of variance in MOT by “inclin” items.

Figure 7
 Resulting First-Order Measurement Model of the FTS (Form B)

Table 18
 First-Order Multigroup CFA Results of the FTS

Model	Absolute Fit Indices					Comparative Fit Indices		
	RMSEA	SRMR	χ^2	df	χ^2/df	$\Delta\chi^2$	GFI	CFI
<u>Configural Invariance</u>	.057	.021	123.24*	47	2.62	--	.97	.99
<u>Metric Invariance</u>	100	.046	300.52*	53	5.67	177.28 (6)*	.89	.96
expect2-HYP Invariance	.057	.046	128.18*	48	2.67	4.94 (1)	.97	.99
expect5-HYP Invariance	.100	.025	286.38*	48	5.97	163.14 (1)*	.90	.97
open3-CON Invariance	.057	.041	126.22*	48	2.63	2.98 (1)	.97	.99
open5-CON Invariance	.056	.026	123.59*	48	2.57	75.59 (1)*	.97	.99
inclin3-MOT Invariance	.056	.022	123.24*	48	2.57	.00 (1)	.97	.99
inclin4-MOT Invariance	.056	.021	123.60*	48	2.58	.36 (1)	.97	.99

* $p < .001$

Configural invariance was assessed by conducting a single, first-order CFA with both models included together. The results indicate good fit (RMSEA = .057; SRMR = .021; $\chi^2/df = 2.62$; GFI = .97; CFI = .99), which suggests that Forms A and B share a common factor structure

in that both models contain three latent factors with the same items loading onto each factor (except for the discrepant cross-loading item).

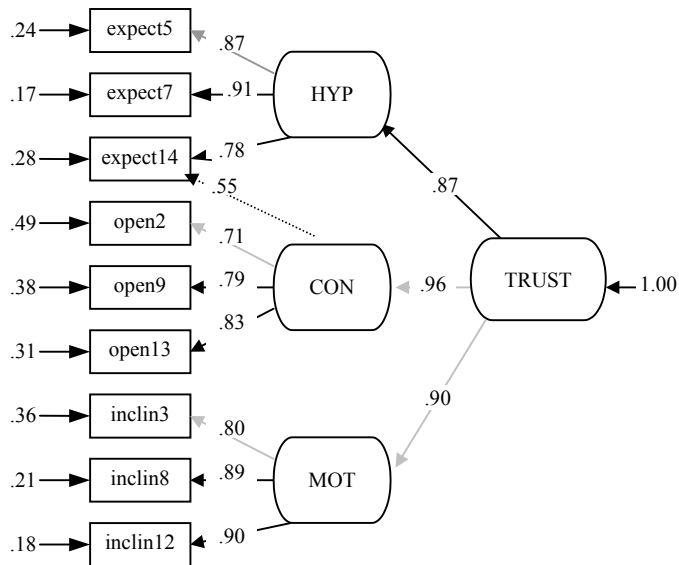
Metric invariance was assessed by setting all factor loadings to be equal across the two models. When compared to the model of configural invariance, however, there was a significant change in chi-squared ($\Delta\chi^2(6) = 177.28, p < .001$), indicating that at least one of the factor loadings differed between the two FTS forms. Therefore, each factor loading was restricted and assessed separately to identify the sources of variance. As shown in Table 18, four of the six paths were invariant between the two FTS forms, given that they resulted in nonsignificant changes in chi-squared. Only two (expect5-HYP and open5-CON) of the six common paths were variant in terms of significant changes in chi-squared ($\Delta\chi^2(1) = 163.14$ and $75.59, p < .001$, respectively). This discrepancy suggests that Samples A and B regarded these two items differently in terms of their relevant importance as indicators of their respective latent constructs.

Second-Order Multigroup CFA Results

The second-order models for Forms A and B also were assessed for conceptual similarity. The second-order model for Form A was discussed in the previous section and is illustrated in Figure 6. The second-order model for Form B fit the data well (RMSEA = .061; SRMR = .021; $\chi^2/df = 2.72$; AGFI = .94; CFI = .99), and is depicted in Figure 8. These results suggest that the three FTS scales of Form B also load onto a common higher-order factor (i.e., trust).

Second-order configural and metric invariance were assessed. The results are provided in Table 19. The model for configural invariance resulted in good fit (RMSEA = .057; SRMR = .021; $\chi^2/df = 2.62$; GFI = .97; CFI = .99), indicating that the first-order factors load onto a higher-order factor for both forms of the FTS. The model for metric invariance resulted in adequate fit (RMSEA = .061; SRMR = .11; $\chi^2/df = 3.06$; GFI = .97; CFI = .99), but also resulted in a

significant change in chi-squared ($\Delta\chi^2(1) = 20.97, p < .001$). Therefore, each path was restricted as equal to identify the source of the discrepancy; the MOT-TRUST path was identified given its significant change statistic ($\Delta\chi^2(1) = 17.79, p < .001$), which suggests a divergence in this path between the Forms A and B of the FTS. As such, Forms A and B of the FTS resulted in similar factor structures, but they differed in latent factors loaded onto the higher-order factor.



RMSEA = .061; SRMR = .021; $\chi^2 = 62.49$; $df = 23$; $\chi^2/df = 2.72$; AGFI = .94; CFI = .99
 All paths are significant, $p < .001$. 73% of variance in HYP explained by “expect” items. 61% of variance in CON explained by “open” items. 75% of variance in MOT explained by “inclin” items. 73% of variance in TRUST explained by all items. 91% of variance in TRUST explained by the first-order factors.

Figure 8
 Resulting Second-Order Measurement Model of the FTS (Form B)

Table 19
 Second-Order Multigroup CFA Results of the FTS

Model	Absolute Fit Indices					Comparative Fit Indices		
	RMSEA	SRMR	χ^2	df	χ^2/df	$\Delta\chi^2$	GFI	CFI
<u>Configural Invariance</u>	.057	.021	123.24*	47	2.62	--	.97	.99
<u>Metric Invariance</u>	.061	.011	144.21*	49	2.94	20.97 (2)*	.97	.99
HYP-TRUST Invariance	.056	.035	124.55*	48	2.59	1.31 (1)	.97	.99
CON-TRUST Invariance	.059	.059	130.69*	48	2.75	7.45 (1)	.97	.99
MOT-TRUST Invariance	.062	.10	141.03*	48	2.94	17.79 (1)*	.97	.99

* $p < .001$

The Psychometric Properties of the FTS

The psychometric properties of the resulting FTS were assessed. Specifically, the reliabilities of the overall FTS scores and the scores of its three sub-scales were assessed for both forms of the FTS. In addition, the validity of the FTS as a representative measure of trust was estimated for both forms of the FTS in terms of its content, face, convergent, and discriminant validity. The results of these analyses are presented in the following sections.

Reliability and Descriptive Statistics

Scale reliability was calculated for both forms of the FTS. Table 20 reports the scale means, standard deviations, and internal consistencies of the measures from Sample A (i.e., work situation) and Sample B (i.e., academic situation). The alpha values for the FTS scales ranged from .82 to .94, all of which exceeded the .70 standard for adequate internal consistency of psychometric scales (Nunnally, 1970).

Table 20
Psychometric Properties of the FTS and Other Measures

		Scale Properties		Sample A N = 552			Sample B N = 498		
		Number of Items	Score Ranges	<u>M</u>	<u>SD</u>	<u>alpha</u>	<u>M</u>	<u>SD</u>	<u>alpha</u>
Target/ Context Directed Measures	FTS	9	-5.75 - 5.75	3.24	1.68	.94	.87	2.16	.94
	HYP	3	-5.75 - 5.75	3.44	1.69	.84	1.54	2.11	.85
	CON	3	-5.75 - 5.75	3.13	1.84	.84	.79	2.21	.82
	MOT	3	-5.75 - 5.75	3.14	1.83	.83	.29	2.58	.90
	OTM	3	-3 - 3	1.88	1.17	.91	.50	1.40	.92
Target Directed Measures	PTA	6	1 - 5	4.01	.83	.92	3.39	.46	.74
	PTB	5	1 - 5	3.84	.91	.92	2.91	.57	.78
	PTI	5	1 - 5	3.70	.85	.85	3.21	.43	.59
	SITS	9	1 - 5	3.78	.74	.85	3.34	.46	.72
Self Directed Measures	GTR	10	1 - 5	3.57	.56	.86	3.54	.55	.85
	AS	10	1 - 5	4.02	.52	.84	3.86	.53	.82
	EXT	10	1 - 5	3.59	.67	.85	3.56	.61	.82

Notes: Alphas based on Cronbach's index of internal consistency reliability (Glass & Hopkins, 1996). Scale names are as follows: Functional Trust Scale (FTS), Hypothetical FTS component (HYP), Consequential FTS component (CON), Motivational FTS component (MOT), Overall Trust Measure OTM, Perceived Target Ability, Benevolence and Integrity (PTA, PTB, PTI), Target-Specific Trust (TST), General Trustingness (GTR), Achievement Striving (AS), and Extroversion (EXT).

Content and Face Validity of the FTS

The content validity of the FTS was assessed during scale development in the pilot phase of this project (see Appendix A). Specifically, the FTS was reviewed by eight SMEs, who assessed its content both for clarity and for the conceptual appropriateness of its items. The SMEs were two advanced psychology graduate students and six psychology doctorates with experience in, and knowledge of, the principles of attitude measurement. The SMEs were informed of the theory underlying the FTS and were asked to comment on its content. All SMEs indicated that the conceptual definition of trust was appropriate and that the FTS items appropriately measure each component and dimension of trust.

The face validity of the FTS also was assessed during the scale development pilot studies. Respondents were asked to describe what they thought the instrument measured. All respondents indicated that the instrument measured “trust” or a similar concept, such as “how much I am willing to depend on someone,” “how trusting I am,” and “whether or not I will rely on someone.”

Convergent Validity of the FTS

The validity of the FTS was assessed by examining its relationships to other measures (Butler, 1991; Couch, Adams, & Jones, 1996; Currall & Judge, 1995; Johnson-George & Swap, 1982; Rotter, 1967, 1980). For this purpose, the measures used in this study were classified into one of three categories: trust scales, trust-related scales, and non-trust related scales. The Overall Trust Measure (OTM) was the only other measure considered a trust scale. Although the Target-Specific Trust (TST) scale and the General Trustingness (GTR) scale commonly are used as measures of overall trust, recall from a previous section that such operationalize trust indirectly in terms of its antecedents and/or consequences (Kee & Knox, 1972; Mayer, et al., 1995).

Therefore, the TST and the GTR were considered trust-related measures in the current study.

The other trust-related measures included the Perceptions of Target Ability (PTA), Benevolence (PTB), and Integrity (PTI) scales, which Mayer et al. (1995) consider to be, along with general trustingness, the primary factors impacting levels of trust in a given situation. The non-trust related scales included the Achievement Striving (AS) and Extroversion (EXT) scales, which are measures of personality traits as opposed to trust factors. Table 21 shows the intercorrelations among measures in Samples A and B of the current study.

Table 21
Intercorrelations of Measures

	Sample A – Work Situation N = 552												Sample B – Academic Situation N = 498											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1 FTS	.94												.94											
2 HYP	.95 [†]	.84											.94 [†]	.85										
3 CON	.93 [†]	.83 [†]	.84										.94 [†]	.84 [†]	.82									
4 MOT	.94 [†]	.85 [†]	.78 [†]	.83									.94 [†]	.81 [†]	.81 [†]	.90								
5 OTM	.57 [†]	.54 [†]	.57 [†]	.50 [†]	.91								.83 [†]	.77 [†]	.77 [†]	.79 [†]	.92							
6 PTA	.27 [†]	.24 [†]	.29 [†]	.22 [†]	.53 [†]	.92							.28 [†]	.27 [†]	.28 [†]	.25 [†]	.35 [†]	.74						
7 PTB	.36 [†]	.34 [†]	.38 [†]	.29 [†]	.67 [†]	.70 [†]	.92[†]						.30 [†]	.28 [†]	.29 [†]	.27 [†]	.41 [†]	.50 [†]	.78					
8 PTI	.28 [†]	.27 [†]	.30 [†]	.22 [†]	.61 [†]	.75 [†]	.78 [†]	.85					.24 [†]	.26 [†]	.25 [†]	.18 [†]	.35 [†]	.57 [†]	.51 [†]	.59				
9 TST	.32 [†]	.29 [†]	.35 [†]	.25 [†]	.60 [†]	.68 [†]	.75 [†]	.78 [†]	.85				.18 [†]	.20 [†]	.18 [†]	.14 ^{††}	.34 [†]	.45 [†]	.48 [†]	.56 [†]	.72			
10 GTR	.17 [†]	.12 ^{††}	.16 [†]	.10*	.27 [†]	.21 [†]	.24 [†]	.22 [†]	.28 [†]	.86			.17 [†]	.18 [†]	.15 ^{††}	.14 ^{††}	.31 [†]	.34 [†]	.29 [†]	.37 [†]	.42 [†]	.85		
11 AS	.21 [†]	.19 [†]	.21 [†]	.19 [†]	.23 [†]	.15 ^{††}	.20 [†]	.21 [†]	.23 [†]	.26 [†]	.84		.04	.02	.01	.11*	.04	.14 ^{††}	.12*	.12*	.10*	.22 [†]	.82	
12 EXT	.20 [†]	.20 [†]	.16 [†]	.19 [†]	.18 [†]	.17 [†]	.14 ^{††}	.16 [†]	.15 ^{††}	.20 [†]	.39 [†]	.85	.20 [†]	.21 [†]	.19 [†]	.16 [†]	.27 [†]	.24 [†]	.25 [†]	.22 [†]	.21 [†]	.22 [†]	.39 [†]	.82

[†]p < .001, ^{††}p < .01, *p < .05. Scale names are as follows: Functional Trust Scale (FTS), Hypothetical FTS component (HYP), Consequential FTS component (CON), Motivational FTS component (MOT), Overall Trust Measure OTM, Perceived Target Ability, Benevolence and Integrity (PTA, PTB, PTI), Target-Specific Trust (TST), General Trustingness (GTR), Achievement Striving (AS), and Extroversion (EXT). Internal consistency alphas are presented on the diagonal of each matrix.

The convergent validity of the FTS was assessed by examining the significance of its relationships with the trust and trust-related measures (see Table 21). The FTS (i.e., composite score of FTS items) was expected to be significantly related to the OTM and the trust-related scales. As expected, the FTS was significantly correlated with the OTM in Sample A ($r = .57$, $p < .001$) and in Sample B ($r = .83$, $p < .001$). The FTS also was significantly correlated with trust-related measures in both samples. Similarly, all three of the FTS sub-scales (i.e., HYP, CON, and MOT) were significantly related to the OTM and the trust-related measures in both samples. Although these findings support the convergent validity of the FTS and its sub-scales, the

significant correlations are not surprising given the large sample sizes. Therefore, the magnitudes of these relationships also were compared, and the results are presented in the following section.

Discriminant Validity of the FTS

To assess the discriminant validity of the FTS, its relationships with the overall trust (i.e., OTM), trust-related (i.e., PTA, PTB, PTI, TST, and GTR), and non-trust related measures (i.e., AS, EXT) were compared in terms of the relative magnitude of their correlations. Fisher's r -to- z -transformation procedure was employed to test for significant differences in the magnitude of the relationships (Glass & Hopkins, 1996). The results are presented in the sections below.

Relationships with the Overall Trust Measure (OTM). As measures of overall trust, the magnitude of the FTS's relationship to the OTM was expected to be greater than the relationship between the OTM and the FTS sub-scales (i.e., HYP, CON, MOT) and the relationships between the OTM and the trust-related (i.e., PTA, PTB, PTI, TST, GTR) and non-trust related (i.e., AS and EXT) measures. These relationships were compared and the results are presented in Table 22. As expected, the results indicate that the FTS's relationship with the OTM is significantly stronger than all of the other relationships with the OTM in Sample B. The FTS in Sample A was more strongly related to the OTM in six of the nine comparisons. The only instance in which the FTS was less strongly related to the OTM than another scale was the PTB's (a potential antecedent to trust) relationship to overall trust in Sample A. These results provide general support for the convergent validity of the FTS with overall trust and the divergent validity of the FTS with trust-related and non-trust related measures.

Table 22
Comparisons of Relationships with the Overall Trust Measure (OTM)

		Sample A N = 552	Sample B N = 498	
I_1	I_2	Z_{r1-r2}	Z_{r1-r2}	
FTS-OTM	<u>FTS Sub-Scales</u>			
		OTM-HYP	.73	2.80*
		OTM-CON	.00	2.62*
		OTM-MOT	1.65*	1.80*
		<u>Trust-Related Scales</u>		
		OTM-PTA	1.65*	13.87**
		OTM-PTB	-2.78*	13.68**
		OTM-PTI	-.98	12.63**
		OTM-TST	-.67	13.87**
		OTM-GTR	6.43**	14.53**
		<u>Non-Trust Related Scales</u>		
		FTS-AS	6.95**	20.43**
		FTS-EXT	4.48**	15.28**

** $p < .001$, $Z_{cv} = +3.10$; * $p < .05$, $Z_{cv} = +1.64$.

Table 23
Comparisons of Relationships with Trust-Related Measures

		Sample A N = 552	Sample B N = 498
I_1	I_2	Z_{r1-r2}	Z_{r1-r2}
FTS-OTM	FTS-PTA	6.28**	15.03**
	FTS-PTB	4.52**	14.67**
	FTS-PTI	6.00**	15.75**
	FTS-TST	5.37**	16.77**
	FTS-GTR	8.45**	16.97**
HYP-OTM	HYP-PTA	5.98**	12.17**
	HYP-PTB	4.17**	12.17**
	HYP-PTI	3.60**	12.63**
	HYP-TST	5.08**	13.60**
	HYP-GTR	9.73**	12.36**
CON-OTM	CON-PTA	5.92**	12.23**
	CON-PTB	4.13**	12.18**
	CON-PTI	5.63**	12.95**
	CON-TST	4.72**	14.18**
	CON-GTR	9.72**	14.63**
MOT-OTM	MOT-PTA	5.42**	13.78**
	MOT-PTB	4.27**	13.46**
	MOT-PTI	5.42**	12.67**
	MOT-TST	4.90**	15.68**
	MOT-GTR	7.48**	15.70**

** $p < .001$, $Z_{cv} = +3.10$.

Relationships with Trust-Related Measures. It was expected that, as a measure of trust, the FTS and its sub-scales would be more strongly related to the OTM than to each trust-related measure included in the current study (i.e., PTA, PTB, PTI, TST, GTR). These relationships were compared, and the results are presented in Table 23. The FTS and its three sub-scales (i.e., HYP, CON, and MOT) were significantly more related to the OTM than all five trust-related measures. These results support for the convergent validity of the FTS with the overall trust measure and the discriminant validity of the FTS with trust-related measures.

Relationships with Non-Trust Related Measures. As a measure of trust, it was expected that overall FTS scores would be more strongly related to the OTM and the trust-related (i.e., PTA, PTB, PTI, and TST) measures than to the non-trust related measures (i.e., AS and EXT). These relationships were compared and the results are presented in Table 24. As expected, the FTS's relationship with the OTM was significantly stronger than its relationships with both non-trust related measures in Samples A and B. In Sample B, the FTS's relationships with the trust-related measures were significantly greater than its relationship with the non-trust related measures in five of the eight comparisons. In Sample A, the FTS was more strongly related to the trust-related measures than to the non-trust related measures in three of the eight comparisons. Taken together, these results provide partial support for the discriminant validity of the FTS with the non-trust related measures (i.e., AS and EXT). Specifically, in one sample, the FTS's relationship with each trust-related measure was stronger than its relationship with the AS non-trust related measure; in the other sample, half of the FTS's relationships with trust-related measures were stronger than the EXT non-trust related measure.

Table 24
Comparisons of Relationships with Non-Trust Related Measures

I_1	I_2	Sample A	Sample B
		N = 552	N = 498
		Z_{r1-r2}	Z_{r1-r2}
FTS-OTM	FTS-AS	7.25**	20.50**
	FTS-EXT	7.50**	16.45**
FTS-PTA	FTS-AS	.97	5.47**
	FTS-EXT	1.22	1.42
FTS-PTB	FTS-AS	2.73	5.83**
	FTS-EXT	2.98*	1.78*
FTS-PTI	FTS-AS	1.25	4.75**
	FTS-EXT	1.50	.70
FTS-TST	FTS-AS	1.88*	3.70**
	FTS-EXT	2.13**	-.35

** $p < .001$, $Z_{cv} = +3.10$; * $p < .05$, $Z_{cv} = +1.64$.

As the only trust-related measure in the current study that was situation-nonspecific, the GTR was excluded from these analyses.

DISCUSSION

An understanding of trust is important in both organizational research and practice (Bigley & Pearce, 1998; Kramer & Tyler, 1996). However, various inconsistencies and deficiencies regarding how trust has been defined and measured has generated confusion about what trust is and when it occurs. As such, the literature has been lacking a comprehensive definition of trust that can be applied consistently across a variety of empirical and practical settings. The purpose of this paper was to offer comprehensive conceptual and operational definitions of trust in an attempt to provide researchers and practitioners with a perspective that may be applied to, and foster integration among, various areas in which trust is of interest.

To clarify the nature of this construct, 10 basic characteristics of trust were proposed based on a convergence and reconciliation of aspects of the construct that are inconsistently represented in different definitions. The first four characteristics were proposed in an attempt to describe the basic type of construct trust is (and is not). First, trust is defined as an attitude, not a behavior, such that it consists of one's thoughts, feelings, and behavioral intentions. Second, trust is social in nature, such that it refers to one party's (i.e., trustor) attitude about another party's (i.e., target) influence over one's own outcomes in a given situation (i.e., context). As such, trust refers to an assessment of the influence that comes from interaction among a trustor, target, and context. Third, trust is conceptualized as a versatile construct, because although levels of trust might vary from situation to situation, the nature of the construct is considered consistent across situations. Fourth, trust is functional in nature, such that having an attitude about another's influence in a given situation (regardless of how favorable or unfavorable) provides the trustor with a sense of control over the outcomes of an ambiguous situation. That

is, when taken from the perspective of its source, both positive and negative assessments of influence maximize one's perceived ability to more productively manage ambiguous situations.

The next three characteristics of trust pertain to the components of a trustor's attitude (i.e., thoughts, feelings, and behavioral intentions). Fifth, the nature of trust is described as hypothetical in that the a trustor's assessment of influence contains future-oriented predictions in terms of one's beliefs or speculations about the possible outcomes of potential influence (i.e., expectations of influence). Sixth, trust is considered consequential in nature, such that it contains value-oriented sentiments about influence in terms of one's feelings about the perceived risks and opportunities associated with potential influence in a given situation (i.e., openness to influence). Seventh, trust is motivational in nature, such that it contains goal-oriented intentions in terms of one's preferences for if, and how, influence might occur in a given situation (i.e., inclination toward influence). Together, the three components of trust reflect a functional assessment of influence in a given situation.

The last three characteristics of trust specified pertain to the dimensions (i.e., direction, magnitude, and strength) along which each component of a trustor's attitude may vary. Eighth, trust is conceptualized as a symmetrical construct, such that any given trustor sentiment may reflect positive or negative perceptions of the quality of influence in a given situation (i.e., direction), but not both at the same time. Ninth, trust also is incremental in nature, such that trustor sentiments may vary in terms of *how* positive or negative influence is perceived to be (i.e., magnitude). The zero point between very positive (i.e., trust) and very negative (i.e., distrust) is ambivalence. Finally, trust is considered conditional in nature, such that the extent to which the perceived quality and significance of influence reflect a trustor's attitude is based on the intensity of such perceptions (i.e., strength). That is, the level of a trustor's attitude is a

function of not only the direction and magnitude of a trustor's sentiments, but also their strength. Together, the three dimensions of a trustor's attitude create a single trust/distrust continuum that is calibrated in both directions of ambivalence (shown in Figure 4), along which different levels of trust may be identified and compared.

The main tenet of the view of trust presented in this paper is that trust is a multifaceted construct, and the 10 characteristics of trust each represent a unique and necessary aspect of its nature. As such, no one characteristic (or sub-set of characteristics) is considered adequate to define trust. Therefore, in an effort to provide a comprehensive description of its nature, a definition of trust was constructed based on all 10 of its basic characteristics (see page 40). By conceptualizing trust in terms of its 10 basic characteristics, this definition is intended to provide a more direct and complete description of the nature of trust than previous definitions. In addition, a measure of trust was constructed, the Functional Trust Scale (FTS), to operationalize this complex construct in terms of all 10 of its defining characteristics in an effort to provide a direct and complete assessment of the construct. A study was conducted to assess the FTS and its underlying theory. The findings of this study are discussed below, followed by discussions of the limitations, contributions, and future directions of this paper.

The Structure of the FTS

Based on the concept of trust developed in this paper, the FTS was constructed with a 3 (component) X 3 (dimension) structure. Specifically, trust is conceptualized as comprising three attitudinal components: one's expectations of (i.e., Hypothetical thoughts), openness to (i.e., Consequential feelings), and inclinations toward (i.e., Motivational intentions) influence from another in a given situation. In addition, each of these components was defined as assessments of influence with three dimensions: the perceived quality of influence in a given situation (i.e.,

direction), the perceived impact or significance of influence in a given situation (i.e., magnitude), and the intensity of such perceptions (i.e., strength). The appropriateness of this structure was examined in the current study using CFA to assess the goodness-of-fit of the hypothesized 3 X 3 structure of trust. The fit of the hypothesized 3 X 3 model was compared to 14 alternate models that were constructed a priori to represent different combinations of the components and dimensions that often are reflected in other theories and measures of trust. As discussed below, the results of these comparisons provide some basic support for the hypothesized 3 X 3 structure in three important ways.

First, in all but one case, the three-factor model that separates the components of trust (i.e., Hypothetical, Consequential, and Motivational) resulted in significantly better fit than the four alternate models that collapsed the components into one or two factors. In one of the 12 comparisons among nested models, however, a two-factor model (i.e., HYPCON - MOT) fit as well to the data as the three-factor model. This finding is consistent with previous research that found that the cognitive and emotional components of trust were highly interrelated (Clark & Payne, 1997; Cummings & Bromiley, 1996). Although it might be argued that a well-fitting, two-factor model would represent a more parsimonious model of the constructs being measured, the goal of this scale development study was to identify a measurement model that was both empirically well-fitting and representative of the conceptual nature of trust, which posits three separate components. The results of this study did provide some support for the theoretical relevance of separate trust factors. Specifically, the current study found that some factors loaded differently onto the higher-order factor based on the situation in which the FTS was applied, as evidenced by the instances of metric variance resulting between two different FTS forms. In addition, the patterns of relationships between the FTS sub-scales and the trust-related measures

were somewhat inconsistent between the two forms. Taken together, the findings suggest that the three factors might be unique components that functioned differently in different situations. This is consistent with McAllister's (1995) findings that a trustor's thoughts and feelings have different antecedents and consequences, which suggests that these two components reflect unique aspects of a trustor's attitude. As such, a three-factor structure might help to identify and compare situations when a trustor's thoughts, feelings, and/or behavioral intentions are consistent with one another and with other constructs versus situations in which they are not. However, further research is still needed to clarify this point. Although the results of the current study provided no evidence to suggest that the three-factor model should be rejected in favor of an alternate model, further research is needed to establish the consistency with which the three-factor model might result in better fit than the alternative structures.

Second, the hypothesized scoring method based on three-dimensional assessments of influence (i.e., direction-magnitude-strength) was compared to two alternate scoring methods that used only two-dimensional assessments of influence (i.e., direction-magnitude and direction-strength). Based on the overall picture of fit, the alternate scoring methods did not result in better fit than the hypothesized, three-dimensional scores. There are two potential explanations for these similarity in the fit of the models to the differently scored data. One explanation is that that the two or more of the dimensions do not actually reflect different information, and as such, potentially provide redundant information. This is explanation is consistent with common methods of measuring trust. For example, trust measures often assess only the direction and magnitude of the attitude (e.g., Currall & Judge, 1995; McAllister, 1995; Rotter, 1967, 1980) or the direction and strength (e.g., Butler, 1991; Clark & Payne, 1997; Cook & Wall, 1980; Johnson-George & Swap, 1982). The findings of the current study do not necessarily contradict

the usefulness these approaches. Further research comparing the usefulness of the dimensions is needed to determine if trust is best measured with one, two, or three dimensions. Another explanation is that the three-dimensional approach is more appropriate, given that the current study provides evidence that eliminating one of the three dimensions of trustor responses did not improve fit to the data. These results could be interpreted to suggest that converging the inconsistent approaches of past research into a three-dimensional model of trust represents a more comprehensive assessment of the construct. As such, the FTS might help to provide detailed information about how levels of trust might vary from situation to situation.

Third, the FTS was refined through a process of scale development and model modification using the CFA modification indices to eliminate misfitting items from the FTS scales. As a result, the FTS was reduced from 15 to 9 items, with 3 items in each sub-scale. These modifications resulted in significantly better fit of the hypothesized model as well as contributed to the development of a more functional measure of trust. Specifically, eliminating the misfitting items from each scale of the FTS produced a more succinct measure that maintained the theoretical integrity of the instrument, without disrupting the psychometric properties of its scales. It is important to note that although the scale refinement was conducted in the current study using Sample A, follow-up analyses indicated that the 6 items eliminated using Sample A also were identified as key sources of misfit in Sample B. As such, the same 9-item scale emerged from both samples in the current study. In addition, the second-order CFA results indicate that the three FTS scales load onto a higher-order factor, which suggests that the FTS items jointly reflect a single, underlying construct. This finding supports the use of a composite FTS score to identify (and differentiate) scores along a single trust/distrust continuum.

Overall, these results provide preliminary evidence to support the appropriateness of the FTS's 3 (component) X 3 (dimension) structure of trust. Indirectly, these results provide some support to the concept of trust underlying the FTS, which states that trust consists of three separate components that reflects an assessment of influence that varies along three separate dimensions. Although the findings of the current study provide some initial support for the hypothesized structure of the FTS, it is important to note that a certain degree of similarity in fit resulted across the different models assessed in the current study, particularly in comparing models across the different scoring methods. Therefore, continued research still is needed to compare the different dimensions of trust in different settings. That is, although the results of the current study provided initial support for the appropriateness of the FTS's 3 X 3 structure, they do not necessarily discredit the appropriateness of other structures based on alternate concepts of trust. Continued research that compares specific aspects of different concepts of trust could help to further examine the 3 X 3 concept of trust versus more traditional approaches.

The Applicability of the FTS

Two different forms of the FTS were employed in the current study (i.e., a work situation and an academic situation) to examine the robustness and versatility of the FTS in different social settings. Specifically, the frames of reference for the two situations differed in terms of their trustor (i.e., employees versus students), the target (i.e., supervisor versus classmates), and context (i.e., pay versus grades). Multigroup CFAs were conducted to assess the conceptual equivalence of the two FTS applications in terms of whether they measured the same underlying construct. The results provided partial support for conceptual equivalence, such that two FTS applications shared a similar factor structure, but contained a few different factor loadings. Specifically, in independent analyses both forms of the FTS resulted in the same 9-item, three-

factor, three-dimensional model. However, when examined simultaneously using multigroup CFA, some differences in the links from items to latent factors and from latent factors to the second-order factor emerged between the two FTS forms. One explanation for this partial equivalence is that the FTS did not measure the same thing in the two situations. Another explanation is that, contrary to the notion that trust is versatile in nature, trust might mean different things in different situations, given that factors of the FTS explained scores differently across the two FTS forms. Although the applicability of the FTS was not supported as strongly as was hoped, further research is needed to provide additional evidence to support or reject the notion that the FTS is broadly applicable across situations.

Diefendorff and Silverman (2001) point out that partial conceptual equivalence does not necessarily mean that it is inappropriate to apply measures differently and compare their scores, suggesting that partial equivalence might exist for practical reasons. Because the two FTS forms used in the current study represented deliberately distinct applications with different frames of reference for trust, such partial equivalence may be practically relevant and may even be expected. That is, observing that the two FTS forms resulted in the same factor structure indicates that both forms of the FTS measured the same constructs across situations, with the same items tapping the same three factors, and the same first-order factors loading onto the same higher-order factor. Observing that a few of the factor loadings were different between the two forms is not surprising given that the forms refer to different situations of trust. Although the two FTS forms did not result in identical models, their similarities seem to suggest that they are based on the same conceptual framework with some situational differences in the importance of certain aspects of the measure. These differences might suggest that there are situation-specific differences in the relative importance of each FTS item and each FTS scale. This is consistent

with previous research findings that suggest that trustor sentiments differ according to contextual issues such as the complexity of the situation (Mayer et al., 1995; Sheppard & Sherman, 1996) and the nature of the trustor-target relationship (Kramer, 1996; Lewicki & Bunker, 1995; Meyerson et al., 1996). This supports the notion that the three components are unique aspects of a trustor's attitude that can be helpful in assessing and comparing levels of trust in a variety of situations. As such, the three FTS sub-scales might be useful tools to understanding the development and features of trust in specific situations, such that researchers can compare trust in different situations based on differences in each of its sub-scales. In addition, because the items are not dependent on context-specific references, researchers may apply them to the assessment of trust in a variety of empirical and practical settings.

The Validity of the FTS

The results of the current study provide some initial evidence in two samples that the FTS appropriately measures trust as it was intended. First, feedback obtained from SMEs and respondents suggest that the FTS represents a reasonable operationalization of trust provides evidence for both the face and content validity of the FTS and its sub-scales. Second, the results of the current study provide a basis for the convergent and discriminant validity of the FTS and its sub-scales. Evidence of the convergent and discriminant validity of the FTS is discussed separately in the following paragraphs.

In terms of the convergent validity of the FTS, the current study found that the FTS and its three sub-scales were significantly correlated with a measure of overall trust (i.e., OTM) and with five trust-related measures (i.e., PTA, PTB, PTI, TST, and GTR). These findings suggest that the FTS is related to constructs that have previously been associated with trust. For example, generalized trust and perceptions of target ability, benevolence, and integrity all have

been shown to predict other measures of trust (e.g., Mayer & Davis, 1999; McAllister, 1995; Currall & Judge, 1995). However, the FTS's correlation with the OTM was significantly stronger ($z = 9.01, p < .001$) for Form B, the academic situation ($r = .83, p < .001$) than for Form A, the work situation ($r = .57, p < .001$). There are several possible explanations for this difference. One possibility is simply that Form B represented a better operationalization of trust than did Form A; perhaps the FTS is a better measure of trust in an academic setting than a work setting. As such, the applicability of the FTS as a measure of trust across situations should be further examined. This leads to another possible explanation – that the construct of trust might not be as versatile as conceptualized. A variety of alternate theories might try to explain the different types of trust in different situations (e.g., Lewicki & Bunker, 1996; McAllister, 1995).

A less dramatic explanation might be a methodological limitation of the current study. That is, both the FTS and OTM were considered target/context-directed measures in the current study. As such, they were grouped together in the survey, such that the OTM always appeared after the FTS. It is possible that responding to the FTS impacted responding on the OTM in Sample B (i.e., academic situation), but not in Sample A (i.e., work situation). If these two measures also had been counterbalanced and controlled for order effects, a difference in their correlation between samples might not have been observed.

A theoretical explanation for the different FTS-OTM relationships between forms pertains to the difference in the frames of reference for influence on the two FTS forms. Specifically, research indicates that a trustor's familiarity with a given frame of reference encourages more extreme trustor attitudes (Currall & Judge, 1995; Sorrentino, et al., 1995; Meyerson et al., 1996). Based on information gathered on the demographics survey, this also was the case between the two samples in the current study. That is, trustors in the work situation

reported having more experience with their supervisors changing their pay ($F(1, 1037) = 134.69$, $p < .001$) than students in the academic situation had with their classmates assigning their grades. In addition, the trustors in the work situation expressed more extreme trust/distrust on the FTS ($F(1, 1049) = 1462.94$, $p < .001$) and on the OTM ($F(1, 1049) = 322.56$, $p < .001$) than the trustors in the academic situation. Noting these mean differences, consider the differences in how trust was assessed between the FTS and the OTM. The FTS requires very specific judgments about the given frame of reference, whereas the OTM requires trustors to make a quick, black-and-white assessments of the given frame of reference. However, previous research indicates that individuals who are less familiar with a given situation are more likely to make automatic, gut-reaction assessments of influence, whereas those more familiar make more detailed, calculated judgments (Rotter, 1967, 1981; Scott, 1980; Tyler & DeGoey, 1996). In light of this research, it is possible that Sample B (i.e., academic situation) resulted in a stronger FTS-OTM relationship than Sample A (i.e., work situation) because they were better able to characterize their assessments of influence in terms of broad, automatic judgments on the OTM. That is, differences between novices and experts in how they tend to assess influence might explain why the different types of assessments on the FTS and OTM (i.e., calculated versus automatic, respectively) were not as strongly related in both samples.

In terms of the discriminant validity of the FTS, the FTS and its sub-scales were more strongly related to overall trust than to any of the trust-related and non-trust measures used in the current study. These findings provide evidence of the discriminant nature of the FTS's relationship with the trust-related and non-trust measures, as well as offer additional evidence for the convergence of the FTS and its sub-scales with overall trust. FTS scores in both samples of the current study also were found to be more strongly related to the trust-related measures than

either of the non-trust related measures. However, the FTS was more strongly related to overall trust than the trust-related measures in only one sample (i.e., academic situation), and half in the trust-related measures in the other sample (i.e., work situation).

Although mixed, these results are interesting given the differences in the frames of reference of the two forms. Specifically, recall from a previous section that the trust-related measures (i.e., PTA, PTB, PTI, TST, and GTR) all were considered antecedents to trust, given that they measure potential predictors of the attitude (Kee & Knox, 1970; Mayer et al., 1995). Given that the relevance of any given antecedent to trust likely varies from situation to situation (Butler, 1991; Lewicki et al., 1998; Mayer et al., 1995; Rotter, 1967, 1981; Scott, 1980), it is not surprising that potential antecedents to trust would be differentially related to the FTS in different situations. Actually, these findings support the usefulness of the FTS and its sub-scales in research attempting to identify and differentiate antecedents and consequences of trust across situations. Finally, the patterns of FTS relationships with non-trust measures (i.e., achievement striving and extroversion) also were different between the two samples in the current study. Although unexpected, these results also can be explained by the notion that trust in different situations is predicted by different factors. In light of findings from previous studies in which trustor characteristics such as one's values (Jones & George, 1998) and one's locus of control (Rotter, 1967, 1980) were significantly related to trust, it does not seem surprising that achievement striving and extroversion also would be related to trust or some of its components, at least in some situations.

In general, the results of the current study provide some initial evidence for the validity of the FTS and its three sub-scales. In addition, the differences in relationships with other measures between the two forms of the FTS found in the current study seem to reinforce the notion that the

FTS's sub-scales represent unique aspects of trust that provide important information about the nature of trust in a given situation. As such, the FTS might offer a more functional assessment of trust than correlates of the attitude or simple "trust" measures, such that the separate FTS scales provide more information upon which to base practical and empirical decisions about levels of trust in various situations. Although the results of this study support the validity of the FTS, it represents the initial step in the validation process. That is, the validation of any scale involves a continuous program of study in which the scale must be applied and assessed in a variety of situations using a variety of methods (Brinberg & McGrath, 1982).

Limitations of the Current Study

There are several limitations of the current study. One limitation is that respondents in the study were presented with a fictitious situation within which to assess influence. This could be construed as a threat to the external validity of the results of the study (Fontenelle, Phillips, & Lane, 1985). However, trust, by definition, is a hypothetical construct, such that assessments of influence are in reference to potential influence, not actual influence. As such, the situations used in the current study to frame influence is not a large departure from how influence would be presented in other assessments of trust. Also, in an attempt to limit the potential threat to external validity, the clarity and meaningfulness of the frames of reference used in the current study were first examined in pilot studies to determine if they represented situations to which the respondents could relate; results indicated that they did.

Another limitation associated with the current study pertains to the use of an invalidated measure of overall trust (i.e., the OTM). Because a theoretically appropriate measure of trust was not found in the literature, the OTM was constructed for this study in an effort to elicit simple "trust" responses along the trust/distrust continuum based on the current

conceptualization of trust. Although evidence for the content validity of the OTM was obtained from SMEs prior to using it, no other validity evidence of the OTM was available. However, the OTM did show internal consistency in both samples of the current study ($\alpha = .91$ and $.92$). In addition, the face validity of the FTS seems obvious in that the respondents directly indicated their levels of “trust” on three items.

A third limitation pertains to the similarity of the measures used in the current study. Specifically, all measures were self-report surveys with Likert-type response scales. As such, the potential for mono-method bias exists, such that respondents might have responded similarly on all scales given the similarity of their format (Cook & Campbell, 1983). This is a common problem with research using psychological measures. Although this is a limitation associated with attitude measurement in general, self-report is a direct and appropriate way to measure trust and other attitudes (Messick, 1995).

A related issue is the similarity of the constructs measured in the current study. Specifically, most measures used were considered either trust or trust-related scales. The similarity of content throughout the measures might have presented a bias in responding. To control for this, the different types of measures were completely counterbalanced, and the scales were assessed for evidence of order effects; none were observed. Future research attempting to validate the FTS in terms of its relationship with other trust measures (such as the OTM) also should counterbalance scales within each type of measure to determine if their order impacts the strength of their relationship in different situations.

Another limitation is that the current study provided initial evidence to support the reliability and validity (i.e., face, content, convergent, and discriminant) of the FTS. However, other indications of the psychometric properties of the FTS were not included in the current

study, such as test-retest reliability and criterion-related validity (Murphy & Davidshofer, 1998). Future research should assess the reliability of FTS scores across time to examine the test-retest reliability of the measure in different situations. Assessments of test-retest reliability, however, are only appropriate to the extent that trust in a given situation is expected to remain stable over time. Rotter (1967, 1981) and Scott (1980) suggest that this is most likely appropriate when assessing trust toward very broadly defined frames of reference for trust. In addition, future research should assess the extent to which the FTS predicts trusting behaviors in various situations, such as cooperation, advice-seeking, and information-sharing (e.g., Clark & Payne, 1997; Currall & Judge, 1995; McAllister, 1995). Researchers are cautioned, however, that behavioral consequences of trust often vary between situations, predicting behavioral outcomes of trust is very situation-specific, so it is very difficult, if not impossible, to generalize across situations (Mayer et al., 1995).

Finally, it is important to note that the FTS is a newly constructed measure with a conceptual basis that has not previously been tested or empirically compared to other perspectives. As such, the current study is limited in its focus. Specifically, the current study was intended as an initial assessment of the structure and psychometric properties of the FTS as a viable measure of trust. Although comparisons were made to other perspectives in this study to alternate perspectives, the intention was not necessarily to discredit other perspectives in favor of the FTS. Rather, this first step to assessing the FTS was to consider whether it might be at least as appropriate as some other approaches. The results of the current study suggest that the FTS has potential as a viable measure of trust in that no evidence was found to indicate its irrelevance or inappropriateness in relation to the alternate approaches. However, there were some inconsistencies between the FTS forms that offer only partial evidence for the applicability and

the validity of the FTS. In addition, the similarity in fit across models with different scoring procedures suggests that models other than the hypothesized model might be appropriate. Although the current study does not provide empirical evidence to suggest that the FTS and its conceptual basis are more or less appropriate than other approaches, it contributes to the literature with a good first step to examining the FTS that provides evidence to warrant further examination. This opens the door for research intending to compare the accuracy of trust theories or different approaches to measuring trust in different situations.

Contributions and Implications

The current paper makes several contributions to the literature, each of which has implications for trust research and practical applications of trust principles. A large contribution to the literature pertains to the approach taken to conceptualize trust. First, the identification and discussion of the basic characteristics of trust offers the needed clarification regarding the nature of this construct. This clarification has implications for how research on trust is approached. The key factors that should be considered when addressing this complex construct have been delineated in the 10 defining characteristics of trust presented in this paper. This might help researchers prevent conceptual errors and inconsistencies when discussing trust and how it functions in a variety of situations. Second, the definition of trust presented in this paper offers a comprehensive concept of trust that expands upon existing trust definitions. This definition of trust is not needlessly limited by situation-specific references, so it can be used to discuss trust in various situations in which it might occur. This might promote consistency in the discussion and study of trust across academic disciplines, research perspectives, and practical settings.

The introduction of the Functional Trust Scale (FTS) also makes a contribution to the literature. Because the FTS is based on a comprehensive definition of trust, it has several

operational advantages over the trust scales that typically are used. First, the FTS was designed to focus directly on trust as it is experienced by its source, rather than attempting to infer it from potential correlates of the attitude. This has implications for improving the accuracy with which trust is measured and scores are interpreted. By eliminating the potentially inaccurate inferences that limit existing trust scales, the FTS can help obtain a more direct and accurate estimate of trust than previously was available. Second, the FTS's content was designed to separately tap each component of the attitude (thoughts, feelings, and behavioral intentions). This might help researchers and practitioners identify and compare overall levels of trust through composite FTS scores, as well as examine how levels of trust differ in terms of differences in the specific sentiments underlying a given score. This could help trust researchers by providing detail with which to develop and test theories. Similarly, the separate FTS sub-scales also could help practitioners understand where trust breaks down and identify the specific sentiments that should be targeted for development initiatives. Third, each trustor sentiment is measured in terms of all three dimensions associated with making assessments of influence (i.e., direction, magnitude, and strength). This helps differentiate among subtle differences in trust, which can be very helpful in terms of measuring trust as part of theory development and hypothesis testing. Finally, and perhaps most importantly, the FTS allows for user-defined specificity so that it may be readily applied to a variety of situations. This is a major contribution toward fostering more consistency in the study of trust.

A related contribution of this study is the introduction of the OTM. That is, the OTM was designed to be an overall measure of trust that assesses the attitude by directly asking trustors to place themselves along the trust/distrust continuum. Although the advantages of the FTS over this broad approach have been discussed in terms of the detail provided by the FTS's

sub-scales, the OTM might be useful in situations in which such detail is not required. Specifically, the OTM might be useful to researchers and practitioners interested in only taking a quick snapshot assessment of trust without concern for what sentiments are involved. With further validation evidence, then, the OTM might represent a basic alternative to measuring trust, which, if appropriately applied, might be a useful tool.

Directions for Future Research

Although the merits of the FTS and its underlying concept have been argued in this paper, future research should examine the FTS and the tenets of its conceptual basis in relation to other perspectives. For example, future research might examine each characteristic of trust and how it functions. One example is to assess the notion that trust is functional in nature such that all levels of trust are assumed to provide a sense of control; future research might examine the relationship between trust and perceived control. Other research might examine how each trustor sentiment and its underlying dimensions contribute to an overall attitude of trust, or how each might be used to identify antecedents and consequences of trust in a variety of situations.

Regarding the FTS as an operationalization of trust, future research should attempt to cross-validate the findings of the current study using a variety of different methods in a variety of different situations. Specifically, examining the psychometric properties of the FTS when applied in different situations, relationships, and disciplines will help to further assess its validity and examine its applicability. In addition, the FTS might be used to replicate findings about trust that were based on other measures of trust. This would help to validate the FTS as well as possibly better integrate and understand the findings that are based on inconsistent measures of trust. Researchers and practitioners might also apply and assess the FTS with frames of reference that vary in specificity. For example, it would be interesting to determine if the FTS

used to measure trust toward a broad target (such as people in general) and in a broad context (such as relationships in general) results in the same three-factor, three-dimensional measurement model identified in the current study. Other validation efforts might include an assessment of the criterion-related validity of the FTS and its sub-scales by determining the extent to which it predicts behavioral and attitudinal outcomes of trust in various situations. Findings from such research would provide further information about the validity of the FTS as well as help foster an understanding of the concept of trust and how it functions across different types of relationships and settings.

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APPENDIX A: SCALE CLARIFICATION PILOT STUDIES

Because the FTS is written broadly so that it may be used in a variety of settings, a series of pilot studies were conducted to assess respondents' understanding of the FTS items and instructions and to identify opportunities for clarification. A series of six pilot studies was conducted for this purpose. In each study, feedback was obtained from respondents on the clarity of the scale's format, instructions, and items. Revisions were made based on such feedback to enhance its clarity for respondents. All participants were psychology students at a large, southern university who volunteered for course extra credit. The pilot studies are summarized in Table 8, and each is discussed separately below.

Pilot Study 1

For the first step of the pilot, 5 psychology students (2 graduate and 3 undergraduate) were interviewed while completing the FTS. The FTS was administered, on which influence was defined as *your immediate supervisor as a reference on a job application*. This influence was referred to in each item with the phrase "the above influence." Each student completed the FTS in the presence of the examiner, and the examiner elicited verbal feedback on the clarity of each item as it was completed. In general, the students indicated that they understood the items, but that they had to "re-read" each item several times and "think hard" before answering. In addition, the respondents identified items that they found confusing due to "awkward wording" and offered some suggestions on clarifying the wording of some items. Based on respondent feedback, the FTS was then revised to clarify the wording of those items identified as confusing.

Table 8
Summary of Pilot Studies

PILOT	N	FRAME OF REFERENCE (form of influence)	RESPONDENT FEEDBACK			REVISION TO FTS
			Overall Clarity	Item Clarity	Comments & Issues	
Study 1	5	Your immediate supervisor as a reference on a job application	<i>not obtained</i>	<i>not obtained</i>	- had to read each item carefully. - required a lot of thought. - some awkward wording.	- reworded items based on feedback.
Study 2	11	same as Study 1	Acceptable instruction, item, and layout clarity.	<i>not obtained</i>	- not clear that <i>the above influence</i> referred to the frame of reference defined in the instructions. - did not relate to frame of reference as a situation of influence. - identified several items as unclear.	- replaced <i>the above influence</i> with specific frame of reference verbiage on every item. - changed frame of reference to establish a clear situation of influence. - reworded items based on feedback.
Study 3	18	A decision about your pay by your immediate supervisor	Acceptable instructions and layout clarity. Unacceptable item clarity and response ease.	<i>not obtained</i>	- unclear what to factors about frame of reference to consider when making ratings. - identified several items as unclear.	- expanded survey instructions to provide examples of possible outcomes and direct respondent focus. - reworded items based on feedback.
	7	A decision about your grades by your fellow classmates.				
Study 4	11	A decision by your immediate supervisor to change your pay.	<i>not obtained</i>	Acceptable clarity ratings across and within FTS items. Overall clarity of FTS significantly lower than JDI.	- difficult to decide on an answer. - low ratings on items due to not knowing what to base answer on. - awkward wording on a few items.	- reworded items based on feedback.
Study 5	9	A decision by your immediate supervisor to change your pay.	<i>not obtained</i>	Acceptable item clarity. No difference in clarity between the FTS and the JDI.	- did not perceive the hypothetical nature of the situation, so had difficulty relating to the situation and deciding on responses.	- reworded frame of reference and all items to accentuate the hypothetical nature of the situation. - eliminated the item with the lowest clarity within each component. - reworded the instructions to be more broadly applicable.
	10	A rule that your classmates assigned all your grades.				
Study 6	12	Suppose that your immediate supervisor could change your pay.	Acceptable ratings on all measures. No differences across forms. No major effects due to order of items.		- no major issues arose, though some still suggested that they had to think hard to answer.	- both forms of the FTS was finalized and used to assess the psychometric properties and factorial structure of the FTS.
	8	Suppose that your classmates could assign your grades.				

Pilot Study 2

The revised FTS was administered to 11 undergraduate psychology students. In addition, a feedback form (see Appendix B) was attached to the FTS to obtain ratings on the clarity (1-very confusing to 5-very clear) of its instructions, questions, and layout as well as on the ease (1-very difficult to 5-very easy) of responding and completing the overall survey. The feedback form also asked respondents to provide open-ended comments to specify any items they found difficult and to offer suggestions for improvements. Upon completing the FTS and the feedback form, respondents were individually interviewed to clarify their ratings and comments.

Overall, the feedback ratings were high: instruction clarity ($\underline{M} = 4.00$, $\underline{SD} = 1.00$), question clarity ($\underline{M} = 3.64$, $\underline{SD} = 1.00$), layout clarity ($\underline{M} = 4.57$, $\underline{SD} = 1.00$), response ease ($\underline{M} = 3.93$, $\underline{SD} = 1.00$), and completion ease ($\underline{M} = 3.79$, $\underline{SD} = 1.00$). Given the wording of the neutral option on the clarity rating scale (i.e., 3-neither clear nor confusing), it was decided that only mean ratings above 3.50 would be considered acceptable in terms of having been perceived as at least “somewhat clear.” Although the objective ratings indicate acceptable levels of survey clarity and ease, the respondents included several open-ended comments and suggestions that pointed to the need for revision.

First, the respondents indicated that they did not understand what “the above influence” meant in each question. In other words, they were not readily able to read each question about “the above influence” and respond in terms of the target/context defined in the instructions. To remedy this, the FTS was revised to repeat the target/context in the text of each item in place of the phrase “the above influence.” This change is intended to elicit ratings of the frame of reference directly without requiring respondents to continually refer to the instructions for a reminder of the frame of reference for each item. For example, with the current frame of

reference, the item “I think that the above influence would be _____” would read “I think that my supervisor as a reference on a job application would be _____.”

Second, when interviewed about what they were thinking about while answering the questions, it was clear that the respondents did not understand the influence frame of reference (i.e., *your immediate supervisor as a reference on a job application*). That is, the respondents commonly asked for clarification on this reference. Examples of their questions and comments on this point were as follows: “What do you mean by reference on an application?”, “But I am not applying for a job,” “Who is applying for the job, me or my supervisor?” and “Why does my supervisor matter on a job application?” These questions and comments suggest that the respondents could not relate to the defined context, nor was the target (i.e., supervisor) perceived as relevant to the outcome of the context (i.e., job application). It was concluded that the frame of reference as defined did not sufficiently reflect an instance of social influence to which the respondents could relate. Therefore, the frame of reference was changed for subsequent studies to establish a clearer situation of potential influence (i.e., *a decision about your pay by your immediate supervisor; a decision about your grades by your fellow classmates*).

Finally, several items were identified by more than one respondent as being difficult or unclear. Therefore, minor wording changes were made to the items in an attempt to make them more straightforward and easy to understand. When available, the respondents’ specific comments and suggestions were used as the basis for revisions.

Pilot Study 3

A third pilot study was conducted to obtain feedback on the newly revised FTS. In this study, two forms of the FTS were administered to separate samples. The frame of reference of Form A read, *a decision about your pay by your immediate supervisor* (n = 18). The frame of

reference of Form B read, *a decision about your grades by your fellow classmates* ($n = 7$).

Feedback was obtained for both FTS forms using the same method as in Study 2.

Ratings on clarity of instructions (Form A $\underline{M} = 3.67$, $\underline{SD} = 1.24$; Form B $\underline{M} = 3.57$, $\underline{SD} = 1.27$), clarity of layout (Form A $\underline{M} = 4.53$, $\underline{SD} = .72$; Form B $\underline{M} = 5.00$, $\underline{SD} = .00$), response ease (Form A $\underline{M} = 2.50$, $\underline{SD} = .92$; Form B $\underline{M} = 3.00$, $\underline{SD} = 1.00$), and overall ease (Form A $\underline{M} = 2.83$, $\underline{SD} = 1.10$; Form B $\underline{M} = 3.67$, $\underline{SD} = .82$) were comparable between Forms A and B. However, the average clarity rating for the questions on Form A ($\underline{M} = 2.33$, $\underline{SD} = 1.03$) were significantly lower than for Form B ($\underline{M} = 3.43$, $\underline{SD} = 1.40$; $t(23) = -2.163$, $p < .05$). Based on the 3.50 acceptability criteria, it was concluded that the item clarity and response ease on both forms and the overall completion ease of Form A were unacceptable. Because all revisions should be uniform between the two forms of the FTS so the same items could be used across different settings, the respondent comments for both forms were used as the basis for item revision.

Respondent comments were broader than in previous studies. Although their objective ratings of the instructions suggested that they were clear, the respondents' comments and questions indicated that they did not understand how they were supposed to consider the frame of reference (as something good or as something bad). In general, respondents wanted an example of the situation and its outcomes. Comments fell in line with the following: "I don't know what I should be thinking about." Do I assume that my pay/grades will increase or decrease?" Of course, this is not something that could be instructed, because perceptions of the quality of influence is one thing that the FTS is trying to measure. However, the respondents indicated that they understood better when the examiner explained that they should consider whatever they know (or don't know) about the particular situation and decide for themselves

what might happen if that situation occurred. To clarify this issue, the FTS instructions were expanded to include the following passage:

Consider how this situation might turn out. For example, some people might think that, for whatever reason, their supervisor/classmates would increase their pay/grades or change the pay/grade system in a way that makes things better – or vice versa. Others might think that a decision by their supervisor/classmates would lead to higher pay/grades, but would also create other problems – or vice versa. Or, some might think that however this situation turns out, it does not really matter to them either way.

In addition to general problems with focusing their ratings, respondents identified those items they found confusing. The difficult items were re-worded for clarity.

Pilot Study 4

Form A of the revised FTS was administered to 11 undergraduate psychology students. Instead of completing the feedback form from previous studies to elicit feedback on the overall scale, respondents were asked to indicate the clarity of each item on a 5-point scale ranging from 1-very confusing to 5-very clear. In addition, participants completed the Job Description Index (JDI; Smith, Kendall, & Hulin, 1969; attached as Appendix C) and rated the clarity of each of its items. The JDI is a measure of overall job satisfaction and satisfaction with various facets of one's job (e.g., pay, supervisor). It was included to determine how the clarity ratings of a well established and widely used attitude survey compared to those of the FTS. Because satisfaction with one's job, supervisor, and pay could be potential antecedents to trust in the influence of one's supervisor on one's pay, the order of the FTS and the JDI was counterbalanced across participants (FTS-JDI order $n = 6$; JDI-FTS order $n = 5$) to assess and, if necessary, control for any order effects on clarity ratings. Upon survey completion, the examiner reviewed clarity ratings and asked for verbal clarification of any ratings below 4-somewhat clear.

The average clarity rating overall FTS items was acceptable ($M = 4.51$, $SD = .47$). In addition, no individual FTS item received an average clarity below 4-somewhat clear. There was no significant order effect on the average clarity ratings overall FTS items ($t(17.48) = -.296$, ns), which suggests that the clarity of the FTS does not change based on whether it is presented before or after the JDI. However, the average clarity ratings overall JDI items ($M = 4.76$, $SD = .31$) was significantly greater than that of the FTS ($t(1) = -2.49$, $p < .05$). Although FTS items exceed the clarity criteria, additional revisions were made in an attempt to increase the overall clarity of the FTS toward that of the JDI. Items that received any ratings lower than 4-somewhat clear were reviewed and revised based on feedback received during the post-survey interview.

Pilot Study 5

The same methodology from Study 4 was used in Study 5, except that two samples were used. The first sample completed Form A of the FTS and the JDI measure of satisfaction with one's job, supervisor, coworkers, and pay ($n = 9$). The second sample completed Form B of the FTS, and the JDI was altered slightly to measure satisfaction with one's class, professor, classmates, and grades ($n = 10$). The overall clarity of the FTS was highly acceptable for Form A ($M = 4.62$, $SD = .57$) and Form B ($M = 4.48$, $SD = .71$). There were no significant order effects on the clarity ratings of Form A ($t(7) = -.26$, ns) or Form B ($t(8) = -.28$, ns). Overall clarity did not differ significantly between the two forms ($t(17) = .49$, ns). In addition, overall clarity did not differ between the FTS and JDI for Form A ($t(7) = -1.18$, ns) and Form B ($t(9) = -1.63$, ns). Based on the clarity results, the FTS was revised in that the item with the lowest average clarity rating in each of the three FTS components was eliminated from the scale.

Although the clarity ratings of both forms of the FTS are clearly acceptable, the post-survey interview with respondents revealed that they still considered the survey difficult to relate

to and complete. While they understood what the questions were asking, they found it difficult to decide on answers because they did not perceive the situation as being applicable to them (e.g., “My boss doesn’t decide my pay,” “My classmates don’t assign my grades.”). It was concluded that the situation was supposed to be hypothetical and that responses should be made in consideration of their thoughts, feelings, and behavioral intentions about the *possibility* of this situation occurring. To address this issue, the frame of reference was re-worded to accentuate the hypothetical nature of the influence being assessed. The frame of reference was altered to read, “Suppose that your immediate supervisor could change your pay,” and “Suppose that your classmates could assign your grades.” All items were re-worded to pose a hypothetical situation (e.g., “If my supervisor could change my pay, the result would be _____.”).

Upon closer review, it was evident that the instructions included after Study 3 were too situation specific to be applicable across uses of the FTS. The instructions were simplified to be more broadly applicable to read as follows:

Based on whatever you know or assume about the factors in this situation, consider the following:

- What you think would happen if this situation occurred.
- How you feel about the possibility that this situation could occur.
- What you would do to affect if and how this situation could occur (assuming you were given the opportunity to do so).

All revisions were incorporated into both forms of the FTS and a final pilot study was conducted to ensure that clarity ratings were still acceptable.

Pilot Study 6

Study 6 was conducted for two reasons: (1) to determine if clarity ratings remained acceptable after the most recent revisions, and (2) to determine if the order of items within the FTS affects its perceived clarity. Form A (n = 12) and Form B (n = 8) of the FTS were administered. In addition, the order of the items within the FTS were presented three different

ways: (1) randomly mixed across components ($n = 6$), (2) ordered by component with the hypothetical items presented first, the consequential items second, and the motivational items last ($n = 6$), and (3) blocked by components with headers separating and identifying each component.

The reason for this manipulation is to determine if respondents find it easier to make response decisions and complete the survey if the items are presented in some logical order versus randomly. Respondent feedback was obtained with clarity ratings of each item and ratings on the Feedback Form (see Appendix B) at the end of the survey.

The average item clarity overall items exceeds the acceptability criteria for Form A ($\underline{M} = 4.44$, $\underline{SD} = .59$) and Form B ($\underline{M} = 4.29$, $\underline{SD} = .57$). No single item on either form received clarity ratings below the 3.50 criteria. The average item clarity overall items did not differ between Forms A and B ($t(18) = .56$, ns), which indicates that the FTS items were perceived as clear for both applications of the scale. In addition, both forms received acceptable ratings on instruction clarity, item clarity, layout clarity, response ease, and completion ease (see Table 9). There were no significant differences on these ratings between Form A and Form B.

Table 10 shows the means and standard deviations of respondent ratings based on order of items. Notice that most of the means meet the acceptability criteria, with the exception of the overall clarity of items when the components were presented in blocked order. The only significant order effect (despite the small sample size) was for overall item clarity on Form B ($F(2, 5) = 6.35$, $p < .05$), such that overall item clarity was significantly higher when the items were in component order ($\underline{M} = 5.00$, $\underline{SD} = .00$) than in component blocks ($\underline{M} = 2.75$, $\underline{SD} = .96$).

In addition to the generally high feedback on both forms of the FTS, post-survey interviews revealed no major issues to be addressed. Therefore, the FTS is based on the items and instructions used in Pilot 6 will serve as the FTS template (see Appendix D). The two forms

of the FTS used in Pilot 6 will be used to assess the psychometric properties and factorial structure of the FTS. Forms A and B are attached as Appendices F and G, respectively.

Table 9
Pilot Descriptive Statistics of Respondent Feedback on FTS

<u>Feedback Ratings</u>	<u>Form A</u>		<u>Form B</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
average item clarity	4.44	.59	4.29	.57
instruction clarity	4.33	.89	4.25	.71
overall item clarity	3.83	.83	3.75	1.28
layout clarity	4.56	.78	4.13	.99
response ease	3.92	1.08	3.88	1.06
completion ease	4.50	.80	3.86	1.13

Table 10
Pilot Descriptive Statistics of Respondent Feedback by Item Order

<u>Feedback Ratings</u>	<u>Form A</u>						<u>Form B</u>					
	<u>random order</u>		<u>component order</u>		<u>component blocks</u>		<u>random order</u>		<u>component order</u>		<u>component blocks</u>	
	<u>(n = 4)</u>		<u>(n = 4)</u>		<u>(n = 4)</u>		<u>(n = 2)</u>		<u>(n = 2)</u>		<u>(n = 4)</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
average item clarity	4.13	.89	4.55	.36	4.63	.39	4.17	.52	4.87	.19	4.07	.59
instruction clarity	4.50	.58	4.75	.50	3.75	1.26	4.00	.00	5.00	.00	4.00	.82
overall item clarity	3.75	1.26	4.00	.82	3.75	.50	4.50	.71	5.00	.00	2.75	.96
layout clarity	4.50	1.0	4.50	1.00	5.00	.00	4.00	1.41	5.00	.00	3.75	.96
response ease	4.25	.50	4.00	1.41	3.50	1.29	3.50	.71	3.00	1.40	4.00	.82
completion ease	4.75	.50	4.50	1.00	4.25	.96	3.00	.00	4.50	.71	4.00	1.41

**APPENDIX C:
JOB DESCRIPTION INDEX (JDI)**

Put an **X** over the response (yes, ?, no) that best reflects your agreement with each item.

A. The work in my present job (class) is . . .

fascinating	YES	?	NO
routine	YES	?	NO
satisfying	YES	?	NO
boring	YES	?	NO
good	YES	?	NO
creative	YES	?	NO
respected	YES	?	NO
uncomfortable	YES	?	NO
pleasant	YES	?	NO
useful	YES	?	NO
tiring	YES	?	NO
healthful	YES	?	NO
challenging	YES	?	NO
too much to do	YES	?	NO
frustrating	YES	?	NO
simple	YES	?	NO
repetitive	YES	?	NO
gives a sense of accomplishment	YES	?	NO

B. My pay is (grades are) . . .

fair	YES	?	NO
less than I deserve	YES	?	NO
more than I deserve	YES	?	NO

C. My immediate supervisor (professor) is . . .

hard to please	YES	?	NO
impolite	YES	?	NO
praises good work	YES	?	NO
tactful	YES	?	NO
influential	YES	?	NO
up-to-date	YES	?	NO

doesn't supervise enough	YES	?	NO
has favorites	YES	?	NO
tells me where I stand	YES	?	NO
annoying	YES	?	NO
stubborn	YES	?	NO
knows job well	YES	?	NO
bad	YES	?	NO
intelligent	YES	?	NO
poor planner	YES	?	NO
around when needed	YES	?	NO
lazy	YES	?	NO

D. My co-workers (classmates) are . . .

stimulating	YES	?	NO
boring	YES	?	NO
slow	YES	?	NO
helpful	YES	?	NO
stupid	YES	?	NO
responsible	YES	?	NO
fast	YES	?	NO
intelligent	YES	?	NO
talk too much	YES	?	NO
smart	YES	?	NO
lazy	YES	?	NO
unpleasant	YES	?	NO
gossipy	YES	?	NO
active	YES	?	NO
narrow-minded	YES	?	NO
loyal	YES	?	NO
stubborn	YES	?	NO

(Smith, Kendall, & Hulin, 1969)

APPENDIX D:
PROPOSED FUNCTIONAL TRUST SCALE (FTS) – USER TEMPLATE

NOTES: Users have the following options:

- Presenting the items in randomly across components or keeping items for each component together (with or without section headings).
- Replacing the phrases “this situation occurred” and “this situation could occur” in each item with the wording of the specific frame of reference.

INSTRUCTIONS:

Social influence refers to anything that might directly or indirectly impact the outcome(s) of a situation. Consider the influence in the following situation:

(USER - insert the target/context of influence here).

Based on whatever you know or assume about the factors involved in this situation, consider the following:

- What you think would happen if this situation occurred.
- How you feel about the possibility that this situation could occur.
- What you would do to affect if and how this situation could occur (assuming that you were given the opportunity to do so).

On each item below, place an **X** over the response that best reflects your opinion about the influence in this situation.

PART A: Expectations of influence in the above situation.

1a. If this situation occurred, there would be ____ outcomes.

many negative	some negative	a few negative	neither positive nor negative	a few positive	some positive	many positive
---------------	---------------	----------------	-------------------------------	----------------	---------------	---------------

➔ 1b. How likely is this?

not at all	only a little	somewhat	very
------------	---------------	----------	------

2a. If this situation occurred, there would be a ____ result.

very bad	moderately bad	slightly bad	neither good nor bad	slightly good	moderately good	very good
----------	----------------	--------------	----------------------	---------------	-----------------	-----------

➔ 2b. How sure are you?

not at all	only a little	somewhat	very
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3a. If this situation occurred, the result would be ____.

very undesirable	somewhat undesirable	slightly undesirable	neither desirable nor undesirable	slightly desirable	somewhat desirable	very desirable
------------------	----------------------	----------------------	-----------------------------------	--------------------	--------------------	----------------

➔ 3b. How likely is this?

not at all	only a little	somewhat	very
------------	---------------	----------	------

4a. If this situation occurred, it would cause ____.

much more harm than good	somewhat more harm than good	a little more harm than good	neither good nor harm	a little more good than harm	somewhat more good than harm	much more good than harm
--------------------------	------------------------------	------------------------------	-----------------------	------------------------------	------------------------------	--------------------------

➔ 4b. How sure are you?

not at all	only a little	somewhat	very
------------	---------------	----------	------

5a. I think that it would be ____ if this situation occurred.

very harmful	somewhat harmful	slightly harmful	neither helpful nor harmful	slightly helpful	somewhat helpful	very helpful
--------------	------------------	------------------	-----------------------------	------------------	------------------	--------------

➔ 5b. How sure are you?

not at all	only a little	somewhat	very
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PART B: Openness to influence in the above situation.

1a. I would be ____ if this situation occurred.

→ 1b. How much do you feel this way?

upset about all of the outcomes	upset about some of the outcomes	upset about a few of the outcomes	neither happy nor upset	happy about a few of the outcomes	happy about some of the outcomes	happy about all of the outcomes	not at all	only a little	somewhat	very much
---------------------------------	----------------------------------	-----------------------------------	-------------------------	-----------------------------------	----------------------------------	---------------------------------	------------	---------------	----------	-----------

2a. The possibility that this situation occurred gives me ____.

→ 2b. How much do you feel this way?

much grief	some grief	a little grief	neither comfort nor grief	a little comfort	some comfort	much comfort	not at all	only a little	somewhat	very much
------------	------------	----------------	---------------------------	------------------	--------------	--------------	------------	---------------	----------	-----------

3a. I feel that it would be ____ if this situation occurred.

→ 3b. How much do you feel this way?

very risky	somewhat risky	slightly risky	neither safe nor risky	slightly safe	somewhat safe	very safe	not at all	only a little	somewhat	very much
------------	----------------	----------------	------------------------	---------------	---------------	-----------	------------	---------------	----------	-----------

4a. If this situation occurred, I would ____ of the outcomes.

→ 4b. How much do you feel this way?

dread all	dread many	dread some	neither look forward to nor dread	look forward to some	look forward to many	look forward to all	not at all	only a little	somewhat	very much
-----------	------------	------------	-----------------------------------	----------------------	----------------------	---------------------	------------	---------------	----------	-----------

5a. If this situation occurred, I would be ____ the outcomes.

→ 5b. How much do you feel this way?

worried about all of the	worried about many of the	worried about some of the	neither excited nor worried about	excited about some of the	excited about many of the	excited about all of the	not at all	only a little	somewhat	very much
--------------------------	---------------------------	---------------------------	-----------------------------------	---------------------------	---------------------------	--------------------------	------------	---------------	----------	-----------

PART C: Preference for influence in the above situation.

1a. If I could, I would do things that ____ the chance that this situation could occur.

→ 1b. How inclined are you to do so?

greatly minimize	somewhat minimize	slightly minimize	neither maximize nor minimize	slightly maximize	somewhat maximize	greatly maximize	not at all	only a little	somewhat	very
------------------	-------------------	-------------------	-------------------------------	-------------------	-------------------	------------------	------------	---------------	----------	------

2a. If I had an opportunity, I would ____ that this situation occurred.

→ 2b. How inclined are you to do so?

avoid every chance	avoid most chances	avoid some chances	neither seek nor avoid	seek some chances	seek most chances	seek every chance	not at all	only a little	somewhat	very
--------------------	--------------------	--------------------	------------------------	-------------------	-------------------	-------------------	------------	---------------	----------	------

3a. I prefer to be ____ that this situation could occur.

→ 3b. How much do you prefer this?

protected from every chance	protected from most chances	protected from some chances	neither protected from nor open to	open to some chances	open to most chances	open to every chance	not at all	only a little	somewhat	very much
-----------------------------	-----------------------------	-----------------------------	------------------------------------	----------------------	----------------------	----------------------	------------	---------------	----------	-----------

4a. The possibility that this situation could occur should be ____.

→ 4b. How much do you prefer this?

greatly discouraged	moderately discouraged	slightly discouraged	neither encouraged nor discouraged	slightly encouraged	moderately encouraged	greatly encouraged	not at all	only a little	somewhat	very much
---------------------	------------------------	----------------------	------------------------------------	---------------------	-----------------------	--------------------	------------	---------------	----------	-----------

5a. If I could, I would ____ the chance that this situation could occur.

→ 5b. How inclined are you to do so?

greatly decrease	moderately decrease	slightly decrease	neither increase nor decrease	slightly increase	moderately increase	greatly increase	not at all	only a little	somewhat	very
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APPENDIX E:
SCORING KEY FOR THE FUNCTIONAL TRUST SCALE (FTS)

STEP 1: Coding Responses

Each item has 3 responses: direction, magnitude, and strength. The direction and magnitude responses are indicated together in part “a” of each item, and the strength response is indicated in part “b” of each item. Code responses to each item as follows:

<u>Direction & Magnitude Codes for Part “a”</u>							X	<u>Strength Codes for Part “b”</u>			
-3	-2	-1	0	+1	+2	+3		0	1.25	1.50	1.75

Direction and magnitude responses may be coded jointly or separately (researcher’s preference). Joint direction-magnitude codes are shown above, which represents the multiplicative composite of the two dimensions. To code direction and magnitude separately, code direction as -1, 0, or 1; code magnitude as 1, 2, or 3. The strength responses should be coded separately 0, 1.25, 1.50, or 1.75.

STEP 2: Scoring Responses

- Item Scores - Multiply parts “a” and “b” of each item to obtain item scores. Possible item scores range from -5.25 (highly unfavorable perception) through zero (neutral perception) to 5.25 (highly favorable perception).
- Component Sub-Scores - Sum (or average) the three item scores within each component: Hypothetical, Consequential, and Motivational.
- Trust Score - Sum (or average) all items across the three components.

APPENDIX F:
FORM A OF THE PROPOSED FUNCTIONAL TRUST SCALE (FTS)

INSTRUCTIONS:

Social influence refers to anything that might directly or indirectly impact the outcome(s) of a situation. Consider the influence in the following situation:

Suppose that your immediate supervisor could change your pay.

Based on whatever you know or assume about the factors involved in this situation, consider the following:

- What you think would happen if this situation occurred.
- How you feel about the possibility that this situation could occur.
- What you would do to affect if and how this situation could occur (assuming that you were given the opportunity to do so).

On each item below, place an **X** over the response that best reflects your opinion about the influence in this situation.

1a. If my supervisor could change my pay, there would be ____ outcomes.

many negative	some negative	a few negative	neither positive nor negative	a few positive	some positive	many positive
---------------	---------------	----------------	-------------------------------	----------------	---------------	---------------

➔ 1b. How likely is this?

not at all	only a little	somewhat	very
------------	---------------	----------	------

2a. I would be ____ if my supervisor could change my pay.

upset about all of the outcomes	upset about some of the outcomes	upset about a few of the outcomes	neither happy nor upset	happy about a few of the outcomes	happy about some of the outcomes	happy about all of the outcomes
---------------------------------	----------------------------------	-----------------------------------	-------------------------	-----------------------------------	----------------------------------	---------------------------------

➔ 2b. How much do you feel this way?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

3a. If I could, I would do things that ____ the chance that my supervisor could change my pay.

greatly minimize	somewhat minimize	slightly minimize	neither maximize nor minimize	slightly maximize	somewhat maximize	greatly maximize
------------------	-------------------	-------------------	-------------------------------	-------------------	-------------------	------------------

➔ 3b. How inclined are you to do so?

not at all	only a little	somewhat	very
------------	---------------	----------	------

4a. The possibility that my supervisor could change my pay gives me ____.

much grief	some grief	a little grief	neither comfort nor grief	a little comfort	some comfort	much comfort
------------	------------	----------------	---------------------------	------------------	--------------	--------------

➔ 4b. How much do you feel this way?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

5a. If my supervisor could change my pay, there would be a ____ result.

very bad	moderately bad	slightly bad	neither good nor bad	slightly good	moderately good	very good
----------	----------------	--------------	----------------------	---------------	-----------------	-----------

➔ 5b. How sure are you?

not at all	only a little	somewhat	very
------------	---------------	----------	------

6a. If I had an opportunity, I would ____ that my supervisor could change my pay.

avoid every chance	avoid most chances	avoid some chances	neither seek nor avoid	seek some chances	seek most chances	seek every chance
--------------------	--------------------	--------------------	------------------------	-------------------	-------------------	-------------------

➔ 6b. How inclined are you to do so?

not at all	only a little	somewhat	very
------------	---------------	----------	------

7a. If my supervisor could change my pay, the result would be ____.

very undesirable	somewhat undesirable	slightly undesirable	neither desirable nor undesirable	slightly desirable	somewhat desirable	very desirable
------------------	----------------------	----------------------	-----------------------------------	--------------------	--------------------	----------------

→ 7b. How likely is this?

not at all	only a little	somewhat	very
------------	---------------	----------	------

8a. I prefer to be ____ that my supervisor could change my pay.

protected from every chance	protected from most chances	protected from some chances	neither protected from nor open to	open to some chances	open to most chances	open to every chance
-----------------------------	-----------------------------	-----------------------------	------------------------------------	----------------------	----------------------	----------------------

→ 8b. How much do you prefer this?

not at all	only a little	somewhat	very much
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9a. I feel that it would be ____ if my supervisor could change my pay.

very risky	somewhat risky	slightly risky	neither safe nor risky	slightly safe	somewhat safe	very safe
------------	----------------	----------------	------------------------	---------------	---------------	-----------

→ 9b. How much do you feel this way?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

10a. If my supervisor could change my pay, it would cause ____.

much more harm than good	somewhat more harm than good	a little more harm than good	neither good nor harm	a little more good than harm	somewhat more good than harm	much more good than harm
--------------------------	------------------------------	------------------------------	-----------------------	------------------------------	------------------------------	--------------------------

→ 10b. How sure are you?

not at all	only a little	somewhat	very
------------	---------------	----------	------

11a. If my supervisor could change my pay, I would ____ of the outcomes.

dread all	dread many	dread some	neither look forward to nor dread	look forward to some	look forward to many	look forward to all
-----------	------------	------------	-----------------------------------	----------------------	----------------------	---------------------

→ 11b. How much do you feel this way?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

12a. The possibility that my supervisor could change my pay should be ____.

greatly discouraged	moderately discouraged	slightly discouraged	neither encouraged nor discouraged	slightly encouraged	moderately encouraged	greatly encouraged
---------------------	------------------------	----------------------	------------------------------------	---------------------	-----------------------	--------------------

→ 12b. How much do you prefer this?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

13a. If my supervisor could change my pay, I would be ____ outcomes.

worried about all of the	worried about many of the	worried about some of the	neither excited nor worried about	excited about some of the	excited about many of the	excited about all of the
--------------------------	---------------------------	---------------------------	-----------------------------------	---------------------------	---------------------------	--------------------------

→ 13b. How much do you feel this way?

not at all	only a little	somewhat	very much
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14a. I think that it would be ____ if my supervisor could change my pay.

very harmful	somewhat harmful	slightly harmful	neither helpful nor harmful	slightly helpful	somewhat helpful	very helpful
--------------	------------------	------------------	-----------------------------	------------------	------------------	--------------

→ 14b. How sure are you?

not at all	only a little	somewhat	very
------------	---------------	----------	------

15a. If I could, I would ____ the chance that my supervisor could change my pay.

greatly decrease	moderately decrease	slightly decrease	neither increase nor decrease	slightly increase	moderately increase	greatly increase
------------------	---------------------	-------------------	-------------------------------	-------------------	---------------------	------------------

→ 15b. How inclined are you to do so?

not at all	only a little	somewhat	very
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APPENDIX G:
FORM B OF THE PROPOSED FUNCTIONAL TRUST SCALE (FTS)

INSTRUCTIONS:

Social influence refers to anything that might directly or indirectly impact the outcome(s) of a situation. Consider the influence in the following situation:

Suppose that your classmates could assign your grades.

Based on whatever you know or assume about the factors involved in this situation, consider the following:

- What you think would happen if this situation occurred.
- How you feel about the possibility that this situation could occur.
- What you would do to affect it and how this situation could occur (assuming that you were given the opportunity to do so).

On each item below, place an *X* over the response that best reflects your opinion about the influence in this situation.

1a. If my classmates could assign my grades, there would be ____ outcomes.

many negative	some negative	a few negative	neither positive nor negative	a few positive	some positive	many positive
---------------	---------------	----------------	-------------------------------	----------------	---------------	---------------

➔ 1b. How likely is this?

not at all	only a little	somewhat	very
------------	---------------	----------	------

2a. I would be ____ if my classmates could assign my grades.

upset about all of the outcomes	upset about some of the outcomes	upset about a few of the outcomes	neither happy nor upset	happy about a few of the outcomes	happy about some of the outcomes	happy about all of the outcomes
---------------------------------	----------------------------------	-----------------------------------	-------------------------	-----------------------------------	----------------------------------	---------------------------------

➔ 2b. How much do you feel this way?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

3a. If I could, I would do things that ____ the chance that my classmates could assign my grades.

greatly minimize	somewhat minimize	slightly minimize	neither maximize nor minimize	slightly maximize	somewhat maximize	greatly maximize
------------------	-------------------	-------------------	-------------------------------	-------------------	-------------------	------------------

➔ 3b. How inclined are you to do so?

not at all	only a little	somewhat	very
------------	---------------	----------	------

4a. The possibility that my classmates could assign my grades gives me ____.

much grief	some grief	a little grief	neither comfort nor grief	a little comfort	some comfort	much comfort
------------	------------	----------------	---------------------------	------------------	--------------	--------------

➔ 4b. How much do you feel this way?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

5a. If my classmates could assign my grades, there would be a ____ result.

very bad	moderately bad	slightly bad	neither good nor bad	slightly good	moderately good	very good
----------	----------------	--------------	----------------------	---------------	-----------------	-----------

➔ 5b. How sure are you?

not at all	only a little	somewhat	very
------------	---------------	----------	------

6a. If I had an opportunity, I would ____ that my classmates could assign my grades.

avoid every chance	avoid most chances	avoid some chances	neither seek nor avoid	seek some chances	seek most chances	seek every chance
--------------------	--------------------	--------------------	------------------------	-------------------	-------------------	-------------------

➔ 6b. How inclined are you to do so?

not at all	only a little	somewhat	very
------------	---------------	----------	------

7a. If my classmates could assign my grades, the result would be _____.

very undesirable	somewhat undesirable	slightly undesirable	neither desirable nor undesirable	slightly desirable	somewhat desirable	very desirable
------------------	----------------------	----------------------	-----------------------------------	--------------------	--------------------	----------------

→ 7b. How likely is this?

not at all	only a little	somewhat	very
------------	---------------	----------	------

8a. I prefer to be _____ that my classmates could assign my grades.

protected from every chance	protected from most chances	protected from some chances	neither protected from nor open to	open to some chances	open to most chances	open to every chance
-----------------------------	-----------------------------	-----------------------------	------------------------------------	----------------------	----------------------	----------------------

→ 8b. How much do you prefer this?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

9a. I feel that it would be _____ if my classmates could assign my grades.

very risky	somewhat risky	slightly risky	neither safe nor risky	slightly safe	somewhat safe	very safe
------------	----------------	----------------	------------------------	---------------	---------------	-----------

→ 9b. How much do you feel this way?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

10a. If my classmates could assign my grades, it would cause _____.

much more harm than good	somewhat more harm than good	a little more harm than good	neither good nor harm	a little more good than harm	somewhat more good than harm	much more good than harm
--------------------------	------------------------------	------------------------------	-----------------------	------------------------------	------------------------------	--------------------------

→ 10b. How sure are you?

not at all	only a little	somewhat	very
------------	---------------	----------	------

11a. If my classmates could assign my grades, I would _____ of the outcomes.

dread all	dread many	dread some	neither look forward to nor dread	look forward to some	look forward to many	look forward to all
-----------	------------	------------	-----------------------------------	----------------------	----------------------	---------------------

→ 11b. How much do you feel this way?

not at all	only a little	somewhat	very much
------------	---------------	----------	-----------

12a. The possibility that my classmates could assign my grades should be _____.

greatly discouraged	moderately discouraged	slightly discouraged	neither encouraged nor discouraged	slightly encouraged	moderately encouraged	greatly encouraged
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→ 12b. How much do you prefer this?

not at all	only a little	somewhat	very much
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13a. If my classmates could assign my grades, I would be _____ outcomes.

worried about all of the	worried about many of the	worried about some of the	neither excited nor worried about the	excited about some of the	excited about many of the	excited about all of the
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→ 13b. How much do you feel this way?

not at all	only a little	somewhat	very much
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14a. I think that it would be _____ if my classmates could assign my grades.

very harmful	somewhat harmful	slightly harmful	neither helpful nor harmful	slightly helpful	somewhat helpful	very helpful
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→ 14b. How sure are you?

not at all	only a little	somewhat	very
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15a. If I could, I would _____ the chance that my classmates could assign my grades.

greatly decrease	moderately decrease	slightly decrease	neither increase nor decrease	slightly increase	moderately increase	greatly increase
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→ 15b. How inclined are you to do so?

not at all	only a little	somewhat	very
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APPENDIX H:
OVERALL TRUST MEASURE (OTM)

Form A: Work Situation of Influence

1. When it comes to changing my pay, I _____ my supervisor.

completely distrust	moderately distrust	slightly distrust	neither trust nor distrust	slightly trust	moderately trust	completely trust
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2. In general, I think my supervisor is _____. (FILLER ITEM)

very dishonest	somewhat dishonest	slightly dishonest	neither honest nor dishonest	slightly honest	somewhat honest	very honest
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3. If my supervisor could change my pay, I think he/she would do _____.(FILLER ITEM)

only what is best for him/her	mostly what is best for him/her	some of what is best for him/her	neither what is best for me or him/her	some of what is best for me	mostly what is best for me	only what is best for me
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4. I would _____ my supervisor to change my pay.

always distrust	often distrust	sometimes distrust	neither trust nor distrust	sometimes trust	often trust	always trust
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5. I think that my supervisor should be _____ to change my pay.

completely distrusted	moderately distrusted	slightly distrusted	neither trusted nor distrusted	slightly trusted	moderately trusted	completely trusted
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Form B: Academic Situation of Influence

1. When it comes to assigning my grades, I _____ my classmates.

completely distrust	moderately distrust	slightly distrust	neither trust nor distrust	slightly trust	moderately trust	completely trust
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2. In general, I think my classmates are _____. (FILLER ITEM)

very dishonest	somewhat dishonest	slightly dishonest	neither honest nor dishonest	slightly honest	somewhat honest	very honest
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3. If my classmates could assign my grades, I think they would do _____.(FILLER ITEM)

only what is best for them	mostly what is best for them	some of what is best for them	neither what is best for me or them	some of what is best for me	mostly what is best for me	only what is best for me
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4. I would _____ my classmates to assign my grades.

always distrust	often distrust	sometimes distrust	neither trust nor distrust	sometimes trust	often trust	always trust
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5. I think that my classmates should be _____ to assign my grades.

completely distrusted	moderately distrusted	slightly distrusted	neither trusted nor distrusted	slightly trusted	moderately trusted	completely trusted
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APPENDIX I:
PERCEIVED TARGET ABILITY (PTA), BENEVOLENCE (PTB), AND INTEGRITY (PTI)
SCALES

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

Perceived Target Ability (PTA):

1. I feel very confident about target's skills.
2. Target is very capable of performing his/her job.
3. Target has much knowledge about the work that needs to be done.
4. Target has specialized capabilities that can increase our performance.
5. Target is known to be successful at things he/she tries to do.
6. Target is very well qualified.

Perceived Target Benevolence (PTB):

1. Target will go out of his/her way to help me.
2. Target really looks out for what is important to me.
3. Target is very concerned about my welfare.
4. My needs and desires are very important to target.
5. Target would not knowingly do anything to hurt me.

Perceived Target Integrity (PTI):

1. Target has a strong sense of justice.
2. I never have to wonder whether target will stick to his/her word.
3. I like target's values.
4. Target tries hard to be fair in dealings with others.
5. Target's actions and behaviors are not very consistent.*

*reverse-scored item

(Mayer & Davis, 1999)

APPENDIX J:
MEASURE OF TARGET-SPECIFIC TRUST (TST)

NOTE: Response scale adapted from a 9-point to a 5-point agreement scale for consistency in response scales within the survey.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

1. If target gave me a compliment, I would question if target really meant what was said.*
2. If we decided to meet somewhere for lunch, I would be certain target would be there.
3. I would go hiking with target in unfamiliar territory if target assured me that he/she knew the area.
4. I wouldn't want to buy a piece of used furniture from target because I wouldn't believe his/her estimate of its worth.*
5. I would expect target to play fair.
6. I could rely on target to mail an important letter for me if I couldn't get to the post office.
7. I wouldn't be able to confide in target and know that he/she would listen.*
8. I could expect target to tell me the truth.
9. If I had to catch an airplane, I could not be sure target would get me to the airport on time.*

*reverse-scored items
(Johnson-George & Swap, 1982)

APPENDIX K:
MEASURE OF GENERAL TRUSTINGNESS (GTR)

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

1. I suspect hidden motives in others.*
2. I trust what people say.
3. I believe that others have good intentions.
4. I believe in human goodness.
5. I believe that people are essentially evil.*
6. I am wary of others.*
7. I trust others.
8. I believe that people are basically moral.
9. I think that all will be well.
10. I distrust people.*

*reverse-scored items.
(Goldberg, 1999)

APPENDIX L:
MEASURE OF ACHIEVEMENT STRIVING (AS)

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

1. I do just enough work to get by.*
2. I set high standards for myself and others.
3. I plunge into tasks with all my heart.
4. I do more than what is expected of me.
5. I put little time and effort into my work.*
6. I turn plans into actions.
7. I am not highly motivated to succeed.*
8. I go straight for the goal.
9. I demand quality.
10. I work hard.

*reverse scored items
(Goldberg, 1999)

APPENDIX M:
MEASURE OF EXTROVERSION (EXT)

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

1. I prefer to be alone.*
2. I enjoy being part of a group.
3. I speak quietly.*
4. I love large parties.
5. I don't like crowded events.*
6. I love surprise parties.
7. Talk to a lot of different people at parties.
8. I want to be left alone.*
9. I avoid crowds.*
10. I involve others in what I am doing.

*reverse-scored items
(Goldberg, 1999)

APPENDIX N:
MEASURE OF PARTICIPANT DEMOGRAPHICS

1. Male Female (check one)

2. Age = _____

3. College Major = _____

4. Approximate G.P.A. to date = _____

5. What is your position in college? (check one)

Freshman Sophomore Junior Senior

6. How well would you say you know your fellow classmates? (check one)

Not at all Only a little Somewhat Very well

7. In your experience so far, how often have your classmates assigned your grades? (check one)

Never Sometimes Frequently Always

8. Are you currently employed? (check one)

No Yes Self-Employed

➤ If employed, how long have you been in your current job? (check one)

Less than 1 year More than 1 year More than 3 years More than 5 years

➤ How well do you know your immediate supervisor? (check one)

Not at all Only a little Somewhat Very well

➤ In your experience so far, how often has your immediate supervisor been able to change your pay? (check one)

Never Sometimes Frequently Always

APPENDIX O:
REFINED FUNCTIONAL TRUST SCALE (FTS) – USER TEMPLATE

INSTRUCTIONS:

Social influence refers to anything that might directly or indirectly impact the outcome(s) of a situation. Consider the influence in the following situation:

(USER - insert the target/context of influence here).

Based on whatever you know or assume about the factors involved in this situation, consider the following:

- What you think would happen if this situation occurred.
- How you feel about the possibility that this situation could occur.
- What you would do to affect if and how this situation could occur (assuming that you were given the opportunity to do so).

On each item below, place an **X** over the response that best reflects your opinion about the influence in this situation.

1a. If this situation occurred, there would be a _____ result.

very bad	moderately bad	slightly bad	neither good nor bad	slightly good	moderately good	very good
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➔ 1b. How sure are you?

not at all	only a little	somewhat	very
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2a. If this situation occurred, the result would be _____.

very undesirable	somewhat undesirable	slightly undesirable	neither desirable nor undesirable	slightly desirable	somewhat desirable	very desirable
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➔ 2b. How likely is this?

not at all	only a little	somewhat	very
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3a. I think that it would be _____ if this situation occurred.

very harmful	somewhat harmful	slightly harmful	neither helpful nor harmful	slightly helpful	somewhat helpful	very helpful
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➔ 3b. How sure are you?

not at all	only a little	somewhat	very
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4a. I would be _____ if this situation occurred.

upset about all of the outcomes	upset about some of the outcomes	upset about a few of the outcomes	neither happy nor upset	happy about a few of the outcomes	happy about some of the outcomes	happy about all of the outcomes
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➔ 4b. How much do you feel this way?

not at all	only a little	somewhat	very much
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5a. I feel that it would be _____ if this situation occurred.

very risky	somewhat risky	slightly risky	neither safe nor risky	slightly safe	somewhat safe	very safe
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➔ 5b. How much do you feel this way?

not at all	only a little	somewhat	very much
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6a. If this situation occurred, I would be _____ the outcomes.

worried about all of the	worried about many of the	worried about some of the	neither excited nor worried about	excited about some of the	excited about many of the	excited about all of the
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➔ 6b. How much do you feel this way?

not at all	only a little	somewhat	very much
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7a. If I could, I would do things that _____ the chance that this situation could occur.

greatly minimize	somewhat minimize	slightly minimize	neither maximize nor minimize	slightly maximize	somewhat maximize	greatly maximize
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➔ 7b. How inclined are you to do so?

not at all	only a little	somewhat	very
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8a. I prefer to be _____ that this situation could occur.

protected from every chance	protected from most chances	protected from some chances	neither protected from nor open to	open to some chances	open to most chances	open to every chance
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➔ 8b. How much do you prefer this?

not at all	only a little	somewhat	very much
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9a. The possibility that this situation could occur should be _____.

greatly discouraged	moderately discouraged	slightly discouraged	neither encouraged nor discouraged	slightly encouraged	moderately encouraged	greatly encouraged
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➔ 9b. How much do you prefer this?

not at all	only a little	somewhat	very much
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VITA

Donna Romano earned her bachelor's degree in 1994 from the University of Tampa, where she studied psychology and criminology and graduated *magna cum laude*. In 1998, she received her master's degree in industrial and organizational psychology from Louisiana State University. Her master's thesis examined the effects of perceived ability on trust and its behavioral outcomes. Donna completed two doctoral internships within the Corporate Human Resources and Organizational Development functions of large retail corporations: Sears, Roebuck and Co. and Publix Supermarkets, Inc. In 2003, she earned her doctorate in industrial and organizational psychology from Louisiana State University. Her dissertation focused on the concept and measurement of trust. Donna is an active member of the Society for Industrial and Organizational Psychologists and the Academy of Management.