

Models of Interpersonal Trust Development: Theoretical Approaches, Empirical Evidence, and Future Directions[†]

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Most research on trust has taken a static, “snapshot” view; that is, it has approached trust as an independent, mediating, or dependent variable captured by measuring trust at a single point in time. Limited attention has been given to conceptualizing and measuring trust development over time within interpersonal relationships. The authors organize the existing work on trust development into four broad areas: the behavioral approach and three specific conceptualizations of the psychological approach (unidimensional, two-dimensional, and transformational models). They compare and contrast across these approaches and use this analysis to identify unanswered questions and formulate directions for future research.

Keywords: *trust; trust development; interpersonal trust; distrust*

The study of interpersonal trust has provided a fascinating journey for organizational scholars attempting to better understand the dynamics of cooperation and competition (Deutsch, 1958, 1962; Gambetta, 1988), the resolution of conflicts (Deutsch, 1973; Lewicki

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& Stevenson, 1998), and the facilitation of economic exchange (Arrow, 1973; Granovetter, 1985). Trust has emerged as a prominent construct in research predicting individual-level outcomes such as job satisfaction, organizational citizenship behaviors, organizational commitment, turnover, and job performance (Deluga, 1995; Dirks & Ferrin, 2001; Flaherty & Pappas, 2000; Robinson, 1996). Moreover, trust has also been positively associated with revenue and profit at the organizational level of analysis (Davis, Schoorman, Mayer, & Tan, 2000; Simons & McLean Parks, 2002). As trust has been associated with this diverse and impressive array of outcomes, commensurate vigor has gone into specifying the variables that may generate trust as well (Butler, 1991; Dirks & Ferrin, 2001; Mayer, Davis, & Schoorman, 1995; Whitener, Brodt, Korsgaard, & Werner, 1998).

Although researchers have made great theoretical progress in explicating the nomological network of trust, empirical research on trust development has lagged in two ways. First, a number of definitions and conceptualizations of trust have been proposed, yet efforts to measure trust and its component elements have not kept pace. Second, most of the empirical trust research is characterized by static, "snapshot" studies that measure trust at a single point in time and test its relationship with hypothesized variables of interest. Although we have learned a great deal from these studies, they provide limited insight into the dynamic nature of the growth and decline of trust over time within interpersonal relationships.

Despite these limitations, we have seen two different traditions emerge in trust research (Kramer, 1999b):

- The behavioral tradition of trust, which views trust as rational-choice behavior, such as cooperative choices in a game (Hardin, 1993; Williamson, 1981)
- The psychological tradition of trust, which attempts to understand the complex intrapersonal states associated with trust, including expectations, intentions, affect, and dispositions (Mayer et al., 1995; Rousseau, Sitkin, Burt, & Camerer, 1998)

Although these two traditions may be indistinguishable at the observable behavior level, these two camps have provided differential guidance for trust researchers about underlying dynamics and causal elements, and a significant amount of knowledge has been accumulated within each tradition. The purpose of this article is to review and organize this work in order to take stock of what we have learned and where future research should be directed. We begin by describing the behavioral approach. We then review three specific conceptualizations of trust development within the psychological approach: (a) the unidimensional model, which treats trust and distrust as bipolar opposites (e.g., Jones & George, 1998; Mayer et al., 1995; McAllister, 1995); (b) the two-dimensional model, which argues that trust and distrust are two distinctly differentiable dimensions that can vary independently (Lewicki, McAllister, & Bies, 1998); and (c) the transformational model, which asserts that trust has different forms that develop and emerge over time (Lewicki & Bunker, 1995, 1996; Shapiro, Sheppard, & Cheraskin, 1992).

In the sections that follow, we will describe the basic premise of each model and deal with three issues pertinent to conceptualizing trust development: (a) How has trust been defined and measured? (b) At what level does trust begin? and (c) What causes the level of trust to change over time (i.e., how trust grows and declines)? Because theorizing about trust has

been extensive and often different across disciplines, our review will be somewhat selective, focusing on the empirical evidence that is most relevant to these three issues. We will conclude the article by framing the critical questions that remain about trust development and by offering promising directions for future research that have emerged from our review and analysis.

Several cautionary notes are in order before we begin. First, because of the vast volume of studies on trust, we limit our review of trust development to interpersonal interactions, to enable sufficient depth to the discussion and analysis. We acknowledge that a significant amount of research has been done on trust in teams, groups, and organizations, and we will leave to others the discussion of the applicability of trust development to those broader levels. Second, because of space limitations, we will also not be able to integrate the growing literature on trust repair. Third, in reviewing the literature, it is important to note that many of the authors we cite did not explicitly specify their own assumptions about the dimensionality of trust or how trust changes over time. Thus, although we read their work closely, we are often inferring their assumptions and the emphasis on behavioral versus psychological variables. Finally, as we prepared this article, we continually discovered that the semantic distinctions made about various indicators and types of trust are so intertwined that it was incredibly easy to become hogtied in the ball of yarn we were attempting to unravel. We ask the reader to bear with us as we attempt to make important discriminations about a very complex and entwined literature. In an effort to help the reader organize this review, we offer Table 1 as a summary of the theoretical approaches to trust development reviewed here.

Behavioral Approach to Trust Development

Behavioral approaches to trust are grounded in observable choices made by an actor in an interpersonal context. The earliest and clearest example of this approach is found in the work of Deutsch, whose definition of trust asserts that

an individual may be said to have trust in the occurrence of an event if he expects its occurrence and his expectation leads to behavior which he perceives to have greater negative motivational consequences if the expectation is not confirmed than positive motivational consequences if it is confirmed. (1958: 266)

Note that this definition discusses trust as rational expectations and that the referent is both to events produced by persons and by impersonal agents. Although Deutsch narrowed his discussion to separate interpersonal from impersonal events, this orientation to defining both types of trust generally persisted during the next 30 years.

How Is Trust Defined and Measured?

Researchers who work within the behavioral tradition observe behavior in simulated interactions and games, such as the Prisoner's Dilemma, under laboratory conditions that minimize interpersonal interaction. Typically, cooperative behavior is accepted as an observable

Table 1
Theoretical Approaches to Trust Development

		Psychological		
		Unidimensional	Two-Dimensional	Transformational
Key Question	Behavioral	Unidimensional	Two-Dimensional	Transformational
How is trust defined and measured?	Defined in terms of choice behavior, which is derived from confidence and expectations; assumes rational choices. Measured by cooperative behaviors, usually in experimental games.	Defined as confident expectations and/or willingness to be vulnerable; includes cognitive, affective, behavioral intention elements. Measured by scale items where trust ranges from distrust to high trust. More frequently measured in more face-to-face and direct interpersonal contexts.	Defined in terms of confident positive and negative expectations involving measuring different facets of relationships. Measured by scale items where trust and distrust are interrelated but distinct constructs; each ranges from low to high.	Defined in terms of the basis of trust (expected costs and benefits, knowledge of the other; degree of shared values and identity. Measured by scale items where trust is rated along different qualitative indicators of different stages.
At what level does trust begin?	Trust begins at zero when no prior information is available. Trust initiated by cooperative acts by the other, or indication of his or her motivational orientation.	Some argue that trust begins at zero; others argue for moderate-high initial trust; initial distrust is also possible. Factors influencing initial trust level may include personality, cognitive and social categorization processes, role-based behavior, trustee reputation, and institution-based structures.	Trust and distrust begin at low levels (given no information about the other).	Trust begins at a calculative-based stage. Trust initiated by reputation, structures that provide rewards for trustworthiness and deterrents for defection.
What causes the level of trust (distrust) to change over time?	Trust grows as cooperation is extended or reciprocated. Trust declines when the other does not reciprocate cooperation.	Trust grows with increased evidence of trustee's qualities, relationship history, communication processes, and relationship type and structural factors. Trust declines when positive expectations are disconfirmed.	Reasons to trust and distrust accumulate as interactions with other provide more breadth and/or depth or because of structure of interdependence; this could lead to different combinations of trust and distrust.	Trust grows with a positive relationship history and increased knowledge and predictability of the other, and further when parties come to develop an emotional bond and shared values. Trust declines when positive expectations are disconfirmed.

manifestation of trust (Axelrod, 1984). The trustor (the focal decision maker) must decide how much to cooperate with the trustee (the receiver of the trust) and is assumed to make this decision rationally. From this perspective, the trustee's intention, motives, and trustworthiness are inferred from the frequency and level of cooperative choices made. In game situations, trust is indicated by cooperative moves by the participant (paired with a counterpart in an interdependent task involving risk), and distrust is manifested in competitive moves (Arrow, 1974; Axelrod, 1984; Deutsch, 1958). Therefore, the essence of trust in this tradition is the choice to cooperate or not to cooperate (Flores & Solomon, 1998).

Where Does Trust Begin?

In early experiments, the level of trust was presumed to begin at zero. Generally, no past history between players or information about them existed; thus, individuals have to rely on their analysis of the situation and their own predisposition to the situation to make their decisions to cooperate or not. Most researchers who studied trust building and cooperation in simple choice games (e.g., Axelrod, 1984) advocated a cooperative move on the first choice and then a mimicking of the other player's choice on subsequent moves. Others have extended this prescriptive advice to situations where tit-for-tat may not be possible (e.g., Dawes & Orbell, 1995). For example, one group of researchers observed that participants in a "trust game" displayed remarkably high levels of initial trust by risking a financial investment, despite little indication that the trust would be reciprocated by the other (Berg, Dickhaut, & McCabe, 1995).

A variety of later studies with experimental games introduced additional variables, such as information about the other party, in an effort to determine how this information would shape cooperative choices. For example, one stream of research examined the impact of manipulating or measuring motivational orientation on the other's choices. Deutsch (1960) led participants in his experiment to believe that their counterpart possessed one of the three types of motivational orientation: cooperative, individualistic, and competitive. The results suggested that a cooperative motivational orientation led to significantly more cooperative choices than a competitive motivational orientation, whereas an individualistic motivational orientation was heavily influenced by situational factors.

What Causes the Level of Trust to Change Over Time?

Much of this work portrays trust as building incrementally over time as a result of the other's choice to reciprocate cooperation and declining drastically when the other chooses not to reciprocate (Axelrod, 1984; Deutsch, 1958, 1973; Lindsfold, 1978; Pilisuk & Skolnick, 1968). According to descriptions of this process, individuals pursue a Bayesian-like decision process, carefully scrutinizing all trust-relevant information to ensure that trusting choices are wisely made and quickly withdrawing trust should it be misplaced (Hardin, 1993; Kramer, 1996). The operational level of trust is often deduced from either the proportion of cooperative choices or the long-term behavior patterns of those who chose to cooperate. High trust is revealed in a high number of cooperative choices, whereas low trust is indicated in a low

number of cooperative choices. This initial calibration and subsequent updating (Kramer, 1996) roughly describes how trust (and its presumed opposite, distrust) increases or decreases over time.

Because trust is operationalized as the level of cooperative behavior, shifts in the individuals' level of cooperation—for whatever reasons—are presumed to reflect shifts in their trust. Such shifts may result from responses to the other's defection—a trust signaling communication—but also from factors unrelated to trust in the other, such as decision error or boredom. Hence, accurate inferences about trust levels from fluctuations in cooperative behavior may be difficult because of multiple sources of error (Kee & Knox, 1970).

Psychological Approaches to Trust Development—Part 1: The Unidimensional Approach

Whereas the behavioral tradition focuses on observable behavior (and inferred expectations), the psychological tradition emphasizes cognitive and affective processes (e.g., Jones & George, 1998; McAllister, 1995; Williams, 2002). Thus, whereas those who espouse the behavioral approach “fast-forward” to the action and presume that it is rational thinking that led to that action, the psychological approach “backs up” to consider the causes of that action, particularly beliefs, expectations, and affect (e.g., Mayer et al., 1995). For example, in a study examining interpersonal trust in organizations, McAllister's (1995) findings suggest that cognition-based trust precedes affect-based trust. Researchers who describe and test the psychological tradition have used data collection paradigms in more face-to-face, direct interpersonal contexts that focus on parties' intentions; motives and affect toward the other; and perceptions and attributions of the other's personality, qualities, intentions, and capabilities. Therefore, psychological approaches allow for the possibility that trust may result from other factors in addition to, or instead of, strict rationality (e.g., decision biases, “hot” emotions, etc.). Moreover, although psychological approaches may incorporate behavioral measures, the emphasis is on understanding the internal psychological processes and dispositions that shape or alter those choices. Our review indicated three different models within the psychological approach: the unidimensional approach, the two-dimensional approach, and the transformational approach.

In this section, we focus on the unidimensional approach, which considers trust and distrust as bipolar opposites of a single dimension. The following sections elaborate on how trust is defined, where it begins, and how it changes over time in this approach.

How Is Trust Defined and Measured?

Rousseau et al. suggested that trust is “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another” (1998: 395). As a psychological state, trust is composed of two interrelated cognitive processes. The first entails a willingness to accept vulnerability to the actions of another party. The second is that, despite uncertainty about how the other will act, there are positive expectations regarding the other party's intentions, motivations, and behavior. As Baier

suggested, trust is “accepted vulnerability to another’s possible but not expected ill will (or lack of good will) toward one” (1985: 235). Similarly, Robinson defined trust as a person’s “expectations, assumptions or beliefs about the likelihood that another’s future actions will be beneficial, favorable or at least not detrimental” (1996: 576). Mayer et al. defined trust as

the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party. (1995: 712)

Even more complex views approach trust as a multifactorial state that includes cognitive, affective, and behavioral intention subfactors. That is, trust is deemed to be a single, superordinate factor, with cognitive, affective, and behavioral intention subfactors. Such multifactorial models emerged based on criticism of earlier research that only considered trust in the context of experimental games and/or as a result of rational, cognitive processes (Lewis & Weigert, 1985). This recognition compels us to consider cognitive processes that deviate from rationality, as well as the role of emotion and behavioral intentions in assessing trust. Moreover, scholars have asserted that cognition, affect, and behavioral intentions are the basic components of any belief (Cummings & Bromiley, 1996). It should also be noted that, although we proceed to briefly consider the respective roles of cognition, emotion, and behavioral intention, these subfactors are posited to reciprocally affect each other, and the qualitative combination of these factors is expected to differ across different trusting relationships (Lewis & Weigert, 1985), a point raised later when we discuss transformational models.

The cognitive subfactor of trust. The cognitive subfactor encompasses the beliefs and judgments about another’s trustworthiness and is the most emphasized in prior research on trust. As Lewis and Weigert stated, “We cognitively choose whom we will trust in which respects and under which circumstances, and we base the choice on what we take to be ‘good reasons, constituting evidence of trustworthiness’” (1985: 970). However, because trust only meaningfully exists when there is risk (Mayer et al., 1995), trustors do not know with absolute certainty how the trustee will respond a priori. Thus, the cognitive basis of trust allows for the reduction of uncertainty by providing a foundation from which a “leap” can be made—that is, “beyond the expectations that reason and experience alone would warrant” (Lewis & Weigert, 1985: 970). Considerable research from the psychological–unidimensional perspective has focused on identifying the characteristics that underlie beliefs about another’s trustworthiness. A prominent perspective proposes that the most important characteristics in work relationships are ability, benevolence, and integrity (Mayer et al., 1995).

The emotional subfactor of trust. A complementary aspect of trust assessment historically overlooked by researchers is the emotional, or affective, subfactor. Traditionally, if emotion was mentioned at all, it was typically in terms of the anger one experienced at being betrayed in an experimental game (Kramer, Brewer, & Hanna, 1996). However, there is often an emotional bond between the parties, especially in close interpersonal relationships (Lewis & Weigert, 1985). Moreover, the emotions one experiences in a trusting relationship with another (whether they are manifested as moral outrage at egregious trust violations or as

intense affection toward an intimate relationship partner) are likely to affect “the cognitive “platform” . . . from which trust is established and sustained” (Lewis & Weigert, 1985: 971).

The behavioral-intention subfactor of trust. Lewis and Weigert asserted that “the practical significance of trust lies in the social action it underwrites” (1985: 971). That is, to trust behaviorally involves undertaking a course of risky action based on the confident expectation (cognitive basis) and feelings (emotional basis) that the other will honor trust. It is through such trusting behavior that one’s “willingness to be vulnerable to the actions of another party” (Mayer et al., 1995) is demonstrated. Luhmann (1979) has argued that engaging in trusting behaviors actually helps contribute to the cognitive basis of trust. Extending trust engenders reciprocity, so that when we trust others, they become more likely to behave in a trustworthy manner and to trust us in return. Mayer et al. (1995) also argued that the outcome of trusting behavior (i.e., whether trust was well placed or not) provides information that will reinforce or change cognitions about the other party’s trustworthiness.

A few studies have examined whether trust can be empirically distinguished into cognitive, affective, and behavioral components. In a scale development study, Cummings and Bromiley (1996) assessed trust via scale items capturing cognition (e.g., “We think _____ keeps commitments”), affect (e.g., “We feel that we can depend on _____ to move our joint projects forward”), and behavioral intentions (e.g., “We intend to check whether _____ meets its obligations to our _____”). Their study indicated that in general, cognitive and affective response modes were virtually indistinguishable but were distinct from responses to the behavioral-intention items. Clark and Payne (1997) also developed a measure of trust based on cognitive, affective, and behavioral-intention modes and similarly reported that although cognitive and affective modes were indistinguishable, they were clearly distinct from behavioral intentions.

Furthermore, although the definitions of trust referenced above do not mention distrust, prior work in the psychological–unidimensional approach (and, in fact, the behavioral approach as well) has posited, either implicitly or explicitly, that the bipolar opposite of trust is distrust. Indeed, distrust has been defined as a “lack of confidence in the other, a concern that the other may act so as to harm one, that he does not care about one’s welfare or intends to act harmfully, or is hostile” (Govier, 1994: 240). For example, when conceptualized as an individual difference, trust and distrust appear as bipolar opposites (Rotter, 1971), such that low trusting expectations are equivalent to high distrust (Stack, 1988; Tardy, 1988). Other models of trust in the unidimensional approach also deem distrust as the opposite of trust. In a trust scale based on the Mayer et al. (1995) model, an illustrative, reverse-scaled item is “If I had my way, I wouldn’t let top management have any influence over issues that are important to me” (Mayer & Davis, 1999: 136). Similarly, Cummings and Bromiley’s (1996) Organizational Trust Inventory (OTI) includes reverse-coded items related to monitoring and questioning such as “We plan to monitor X’s compliance with our agreement” and “We intend to question X’s statements regarding their capabilities.”

Collectively, the models within the unidimensional approach tend to suggest that (a) expectations are grounded in perceptions of another’s trustworthiness, which leads to a willingness to be vulnerable; (b) trust has several component elements (e.g., cognitions, affect, and/or behavioral intentions); and (c) trust can be meaningfully captured by a unidimensional

construct, where the high end represents strong, positive trust for another, whereas the low end represents strong distrust. Thus, although trust may be conceptualized as having multiple components, often these components are reduced to a single, global trust construct (e.g., Jones & George, 1998; McAllister, 1995; Mishra & Mishra, 1994; Williams, 2002).

Where Does the Level of Trust Begin?

Within the unidimensional approach, there are several specific formulations that differ in terms of the predicted baseline (i.e., the level of trust at Time 0). These include (a) a zero-trust baseline, (b) an initial positive trust baseline, and (c) an initial distrust baseline.

A baseline of zero trust. Most developmental approaches to trust assume that trust begins at a zero baseline and develops gradually over time (e.g., Blau, 1964; Rempel, Holmes, & Zanna, 1985). Jones and George (1998) are representative of this perspective and describe the dynamics well. Following Luhmann (1979), they argue that at the beginning of a social encounter, individuals start at a “zero” point but quickly face a key choice: to trust or not trust. They argue that in most cases, the individual “simply suspends belief that the other is not trustworthy and behaves as if the other has similar values and can be trusted” (Jones & George, 1998: 535). This initial presumption of trust is preferable to an initial assumption of distrust or to a costly investigation of the other to determine the initial level. People then use the initial encounter to test the validity of the trust judgment. If the actor judges that there is general value congruence between him and the other, and the other’s actions did not abuse the actor’s initial trust, then the actor will be oriented to trust in future exchanges. However, if the encounter is trust disconfirming, then that will lead to an orientation of distrust in future exchanges. This is similar to the view argued by Strickland (1958), that if one is to come to trust another, he or she must act presumptively as if the other is worthy of trust and give the trustee the chance of demonstrating trustworthiness (which can only readily be done when the trustor voluntarily becomes vulnerable).

A baseline of moderate–high initial trust. Several authors have challenged the zero-baseline assumption about trust, arguing that even early in a relationship, people experience a remarkably high level of trust. This level is higher than might be expected given a lack of any meaningful interaction with the other that would be used to build the confidence in the other, perception of common values and attitudes, and/or positive affect described by Jones and George (1998). For example, in a survey of MBA students, Kramer (1994) revealed that students who had no interaction history nevertheless demonstrated remarkably high trust for each other. Similarly, Fukuyama (1995) contends that some societal cultures tend to be more trusting than others.

McKnight, Cummings, and Chervany (1998) attempted to account for these findings by arguing that a moderate to high level of initial trust is grounded in three factors: (a) personality factors that predispose an individual to trust others generally,¹ (b) institution-based structures that assure protection against distrusting actions by the other, and (c) cognitive processes that allow individuals to rapidly process information and make initial judgments

or form initial impressions that the other is trustworthy. The authors extensively discuss how each of these factors shapes both trusting beliefs (leading to trusting intentions) and the contextual conditions that will determine whether those trusting intentions are likely to be either fragile or robust.

A second approach to the initial trust baseline is proposed by Meyerson, Weick, and Kramer (1996). These authors attempted to explain how teams of individuals can come together quickly and successfully to work on highly complex, skilled interactions in temporary groups and teams, such as surgical teams, disaster rescue teams, and airline cockpit crews. They argued that in such situations, participants build "swift trust" and that such trust is enabled by several factors:

1. role-based interactions, in which people can be counted on to perform actions consistent with training and development in their role;
2. efforts by actors to minimize inconsistency and unpredictability in that role-based behavior;
3. role-based behaviors (e.g., drills, rituals, procedures) that are derived from broad professional standards that are commonly known and broadly adhered to;
4. recruitment of others from a narrowly defined labor pool such that the reputations of pool members are known, lowering expectations for trust-destroying behavior; and
5. the parties are engaged in tasks that require moderate levels of interdependence.

In short, when parties are engaged in tasks that require moderate interdependence, maintain some social distance from each other in interactions that are role driven, and commit to being adaptable and resilient, trust adequate to complete their tasks can form swiftly and sustain for the duration of their required interaction.

A baseline of initial distrust. Numerous authors have commented on the dynamics of distrust. Our review indicates that it is possible for individuals to begin encounters with initial distrust (or, "negative" trust), and this occurs broadly for three reasons: (a) cultural or psychological factors that bias individuals toward initial distrust; (b) untrustworthy reputation information about another, suggesting that distrust is appropriate; or (c) context or situational factors that warrant such an early judgment.

Kramer (1999a) has described distrust and suspicion as psychological barriers to trust. Distrust can emerge as a function of social categorization processes, such as when in-group individuals presumptively distrust out-group members (Kramer, 1999b). Sitkin and Roth (1993) pointed out that perceptions of value incongruence with the other can lead to initial distrust. Kelley and Stahelski (1970) found support for the notion that some individuals are more prone to act competitively, and they are more likely than their more cooperatively oriented counterparts to act on the assumption that others are untrustworthy, thereby eliciting competitive behaviors from those who would otherwise be cooperative. Besides having a competitive disposition, some individuals have formed a personality-based predisposition to distrust other people in general, usually based on generalizing from a pattern of trust-disconfirming events in the past (Mayer et al., 1995; Rotter, 1967).

In the absence of direct prior experience with a specific individual, one may prepare for interacting with that individual by learning about his or her reputation (Glick & Croson, 2001). If an individual has a reputation for being untrustworthy, this will evoke distrust of

him or her by others who become aware of that negative reputation (Deutsch, 1960; Lewicki & Bunker, 1995, 1996).

Certain types of signals tend to invoke initial distrust. The use of employee-monitoring technologies by management sends a message of distrust of those employees and thus elicits employee distrust of management (Cialdini, 1996), producing a dangerous escalating cycle of distrust between managers and employees over time (Sitkin & Stickel, 1996). Indeed, a study by Strickland (1958) indicates that managers whose interactions with employees entail frequent monitoring processes may get very limited information about employee trustworthiness (as volitional employee behavior is ostensibly constrained by monitoring) and are therefore more likely to create distrust as a self-fulfilling prophecy. Notably, these differences appeared among managers who closely monitored their employees versus those who did not, even though there were no differences in the actual trustworthiness of the subordinates.

What Causes the Level of Trust/Distrust to Change Over Time?

Implicit in our description of these trust approaches are numerous psychological, behavioral, and contextual variables that cause the level of trust to change over time—whether trust begins at a zero point or a nonzero point (positive trust above zero or negative trust below zero). At a simple level, Jones and George (1998) suggested that changes in conditional trust are driven by either trust “rewards,” which lead to unconditional trust, or trust violations, which lead to distrust. At a more detailed level, the unidimensional psychological approach has identified an extensive and comprehensive range of antecedents contributing to trust development, the examination of which is beyond the scope of this article. For example, Ferrin (2003), examining research to date, provided an extensive laundry list of these causal variables; the list contained more than 50 elements that could be described as either direct determinants of the level of trust in a relationship or covariants with the level of trust. These variables can be roughly classified as follows:

- Characteristic qualities of the trustor (e.g., disposition to trust)
- Characteristic qualities of the trustee (e.g., general trustworthiness, ability, benevolence, integrity, reputation, sincerity)
- Characteristics of the past relationship between the parties (e.g., patterns of successful cooperation)
- Characteristics of their communication processes (e.g., threats, promises, openness of communication)
- Characteristics of the relationship form between the parties (e.g., close friends, authority relationships, partners in a market transaction, etc.; see Fiske, 1991)
- Structural parameters that govern the relationship between the parties (e.g., availability of communication mechanisms, availability of third parties, etc.)

Colquitt, Scott, and LePine (2004) performed a meta-analysis of the trust literature, restricting their assessment primarily to key causal variables identified by Mayer et al. (1995) in their integrative model of organizational trust. This meta-analysis suggested that

the perceived trustworthiness of the other party (based on assessments of their ability, benevolence and integrity), the individual's disposition to trust, and affect felt toward the trustee all contribute to the level of trust in interpersonal relationships. It is also noteworthy that the Mayer et al. model is among the few trust models that explicitly incorporates a feedback loop from the outcomes of trusting behavior back to the factors of trustworthiness (ability, benevolence, and integrity). This feature facilitates the modeling of changes in trust over time. Indeed, recent research has provided empirical support for using the Mayer et al. model for explaining the development of trust over time within interdependent teams (Serva, Fuller, & Mayer, 2005).

Psychological Approaches to Trust Development—Part 2: The Two-Dimensional Approach

A more recent approach to the structure of trust views trust and distrust as dimensionally distinct constructs. This approach tends to view trust and distrust as having the same components (cognition, affect, and intentions) as the unidimensional approach but treats trust and distrust as separate dimensions (e.g., Lewicki et al., 1998).

How Is Trust Defined and Measured?

Specifically, trust is regarded as “confident positive expectations regarding another’s conduct,” whereas distrust is “confident negative expectations regarding another’s conduct” (Lewicki et al., 1998: 439). So, although both constructs are invoked to describe certainty judgments about the other’s conduct (Luhmann, 1979, 1988), trust allows the possibility of undesirable behavior by the other to be removed from consideration, whereas distrust reduces complexity by allowing undesirable conduct to be seen as likely (if not certain) and to be managed. In this perspective, trust is a continuum that ranges from low trust to high trust, and distrust is a continuum that ranges from low distrust to high distrust; the two constructs are envisioned to be independent of each other. In this approach, low trust is not the same as high distrust; the former evokes a lack of hope, an unsure assessment of the other’s behavior, and hesitancy, whereas the latter evokes fear, skepticism, and vigilance. Following similar but reverse logic, high trust does not necessarily translate into low distrust: The former suggests hope, faith, and confidence, whereas the latter suggests an absence of fear, skepticism, cynicism, and a need to closely monitor the other. The combined trust/distrust model is presented in Figure 1. Effective measures of these constructs require discriminat-

ing trust and distrust as separate constructs (McAllister, Lewicki, & Bies, 2000). This two-dimensional approach to trust has generally been grounded in a more complex view of the relationship in which trust occurs. Lewicki et al. (1998) argued that most interpersonal relationships are complex and have broad bandwidth.² In such relationships, there may be simultaneous reasons to both trust and distrust another within the same relationship; that is, trust is qualified such that A trusts B to do X and Y, yet distrusts B to do Z (cf. Hardin,

Figure 1
Integrating Trust and Distrust: Alternative Social Realities

High Trust Characterized by: Hope Faith Confidence Assurance Initiative	High value congruence Interdependence promoted Opportunities pursued New initiatives	Trust but verify Relationships highly segmented and bounded Opportunities pursued and downside risks/vulnerabilities continually monitored			
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2	4				
1	3				
Low Trust Characterized by: No Hope No Faith No Confidence Passivity Hesitance	Casual acquaintances Limited interdependence Bounded, "arms-length" transactions Professional courtesy	Undesirable eventualities expected and feared Harmful motives assumed Interdependence managed Preemption. Best offense is a good defense Paranoia			
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2	4				
1	3				
	Low Distrust Characterized by: No Fear Absence of Skepticism Absence of Cynicism Low Monitoring Nonvigilance	High Distrust Characterized by: Fear Skepticism Cynicism Wariness and Watchfulness Vigilance			

1993). For example, one spouse may trust another to take care of the children but not to drive the premium sports car (as past experience has revealed significant inexperience with a stick shift)! Within relationships, reasons for trust and distrust accumulate as interactions with the other person provide more breadth (i.e., crosses more facets of a relationship) and/or more depth (richness within a facet). Across the spectrum of different facets within a complex relationship, ambivalence or "complex trust" (some combined level of trust and distrust) toward another is probably more common than simple trust or simple distrust. When asked whether one trusts or distrusts another, the proper answer is not "yes" or "no" but "to do what?"—that

is, what are the referent facets of the relationship being invoked to make the judgment about the other to answer the question (cf. Hardin, 1993)?

The implications for measurement are complex and yet to be tackled. Further measurement work is required to identify the facets and interdependencies underlying the constructs of trust and distrust and test if these distinctions hold empirically.³ Also, for each of these constructs, the facets and interdependencies could be conceptualized in terms of cognitive, affective, and behavioral subfactors. The cognitive subfactor could be further subdivided into the characteristics that inform judgments of trustworthiness, for example, the 10 conditions of trust identified by Butler (1991) or the three characteristics identified by Mayer et al. (1995). These characteristics represent important ways that one party depends on the actions of another party (e.g., relying on their ability, benevolence, and integrity). This could be operationalized by asking questions about areas in which the rater has confident positive (i.e., trust) and confident negative (i.e., distrust) expectations about the ability, benevolence, and then integrity of the other. The affective subfactor could emphasize emotions (e.g., such as those identified in Lewicki et al., 1998: skepticism, fear vs. hope, confidence). The behavioral trust subfactor could draw on the work of Gillespie (2003), which identified reliance on others and disclosure of sensitive information as salient forms of trusting behavior in working relationships. The behavioral distrust subfactor could draw on identified distrust behaviors (e.g., monitoring, checking, withholding information, and limiting interdependence where possible).

It is clear that there is enormous work on measurement to do, although some work has been done at the subfactor level. A study by McAllister et al. (2000) represents an initial step in developing and validating distinct scales for trust versus distrust. Gillespie (2003) also found that distrust (based on the Lewicki et al., 1998, conceptualization) is empirically distinct from measures of trust and trustworthiness. And Wang (2007), in preliminary testing, has demonstrated that different collections of personal attributes of another cluster into trust and distrust groupings.

Where Does the Level of Trust/Distrust Begin?

Relationships with a limited number of facets and low in richness are likely to result in low trust and low distrust. Lewicki et al. (1998) did not explicitly state that all relationships begin at this point, but they imply that this state occurs early in a relationship and is usually due to a lack of information about the other, resulting in less certainty regarding how the other is likely to behave in future interdependent situations entailing risk. This situation is represented in Cell 1 of Figure 1. However, it should be recognized that any prior information about the other could shift the initial trust judgment away from Cell 1, driven by factors such as reputation information about the other (Stinchcombe & Heimer, 1985), personality factors (Rotter, 1971), or social similarities and differences (Zucker, 1986).

What Causes the Level of Trust/Distrust to Change Over Time?

Trust and distrust levels change as the parties experience each other in a variety of encounters, transactions, and experiences. As Lewicki et al. stated,

Relationships mature with interaction frequency, duration, and the diversity of challenges that relationship partners encounter and face together. Each of these components is essential. If the parties interact frequently and over a long period of time but only superficially, or if they have an issue-rich and frequent exchange but do so only around a limited and bounded problem, or if they interact around many issues but do so infrequently, these conditions limit the potential for the relationship to mature. Alternatively, if these components combine, the knowledge of each relationship partner is enhanced. (1998: 443)

Thus, trust and distrust increase in strength (depth) and breadth (bandwidth) as a function of the frequency, duration, and diversity of experiences that either affirm confidence in positive expectations (trust) or confidence in negative expectations (distrust). Although the model implies that a given relationship can be characterized as any point in the two-dimensional space, three examples are offered. First, as a relationship grows, it may increasingly reflect a large number of positive experiences that have reinforced trust and few, if any, negative experiences that have enhanced distrust. This creates conditions of high trust and low distrust (Cell 2 in Figure 1). The authors offer as an example a small stand in front of a farmer's house in a rural community. The stand contains a few pieces of selected produce and a cash box that is locked and bolted to the stand. The farmer puts patrons "on their honor" to pay something for the vegetables (an indication of trust) but locks the box, bolts the box to the stand, and limits the amount of produce on the stand (appropriate measures of distrust) (after Dawes & Thaler, 1988). Within interpersonal relationships, high-trust/low-distrust relationships are expected to develop as both parties develop a pooled interdependence and actively pursue joint objectives. Over time, this facilitates the expansion of the relationship to new facets and/or richer communication within facets.

Second, relationships may develop to reflect many negative experiences that have enhanced distrust and few positive experiences that have enhanced trust. This creates conditions of low trust and high distrust (Cell 3 of Figure 1). Low-trust, high-distrust conditions lead the party to avoid interdependent situations with the other actor. When those situations cannot be avoided, the party is likely to invest significant resources into preparing for limited encounters, installing control mechanisms to limit and monitor the other's behavior, and attending to vulnerabilities that might be exploited. In addition, individuals in these types of relationships are likely to strictly bound dependence relationships on that other so as to minimize risk and vulnerability.

Finally, relationships may develop into high trust and high distrust (Cell 4 in Figure 1). In this case, an individual has developed confidence in those facets of the relationship where trustworthiness has been established yet is also wary of those facets where negative experiences warrant distrust. In these situations, parties work to engage and further cultivate the facets where trust has been reinforced but to limit access to facets that engender distrust. For example, Mancini (1993), in an ethnographic field study on the relationship between politicians and journalists in Italy, wrote on the practical importance of journalists's building and maintaining trust relationships with politicians to derive information, yet regarding these sources with a certain level of distrust to verify the accuracy of this information before publication.

Psychological Approaches to Trust Development—Part 3: The Transformational Approach

The two previous psychological approaches we have reviewed have examined trust and distrust from a unidimensional or two-dimensional approach. The third psychological approach suggests that there are different types of trust and that the nature of trust itself transforms over time. These models have developed as researchers have attempted to achieve two goals: to understand the nature of trust as relationships develop beyond simple transactional exchanges to other relationship forms (Fiske, 1991) and to understand whether “deep” trust in close relationships is phenomenologically different from transactional trust.

These models were originally proposed in a framework laid out by Shapiro et al. (1992) and elaborated by Lewicki and Bunker (1995, 1996). These authors attempt to explain differences in the articulation of trust development by those studying business relationships compared with those studying intimate, personal relationships (e.g., Boon & Holmes, 1991; Sheppard, 1995). They also attempted to account for changes in the “type” and “structure” of observed trust in developing business relationships. The former (Shapiro et al. 1992) describe trust using a transactional framework (i.e., in terms of interdependence, risk, and vulnerability); in contrast, the latter (Lewicki & Bunker, 1995, 1996) link trust development to stages of relationship development. For example, Boon and Holmes (1991) suggested that intimate relationships move through three stages (from a “romantic love” stage to an “evaluative” stage to an “accommodative relationship” stage) and that the nature of trust transforms as the relationship develops. In the following sections, we will detail each of these approaches, as well as a third approach suggested by Rousseau et al. (1998). We address each approach with the questions used to examine the earlier models. The models are compared in Table 2 and Figures 2, 3 and 4.

Shapiro et al. (1992)

How is trust defined and measured? Shapiro et al. (1992) embraced the Deutsch (1958) definition employed at the beginning of this article. Because they are interested in the development of trust within a business relationship, they focus on the features of a relationship that contribute to three different proposed bases of trust. Deterrence-based trust (DBT) is grounded in whether the other will keep his or her word; it exists “when the potential costs of discontinuing the relationship or the likelihood of retributive action outweigh the short term advantage of acting in a distrustful way” (p. 366). Note that the emphasis in this definition is not on the mutual advantages to be gained from such trust but on claiming that “a primary motivation for keeping one’s word is deterrence” (p. 366), that is, that trust is sustained only through (presumably) the consequences of not maintaining the trust. Thus, their emphasis is on minimizing the likelihood of, and strengthening the consequences for, defection. This focus on vulnerability as the dominant element of trust is more consistent with the Rousseau et al. (1998) definition of trust and with the Lewicki et al. (1998) definition of distrust dynamics.

Table 2
Comparison of the Three Transformational Models

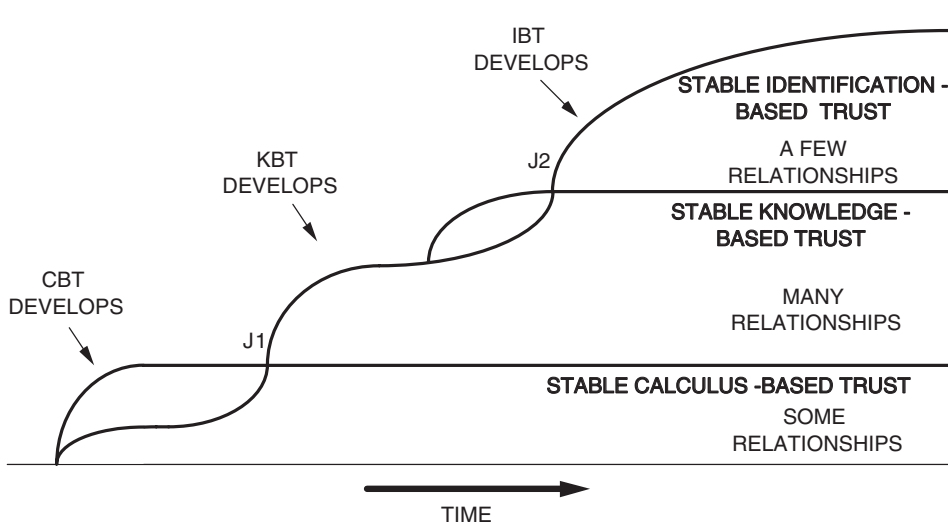
Shapiro, Sheppard, and Cheraskin (1992)	Lewicki and Bunker (1995, 1996)	Rousseau, Sitkin, Burt, and Camerer (1998)
<p><i>Deterrence-based trust:</i> The potential costs of discontinuing the relationship or the likelihood of retributive action outweigh the short-term advantage of acting in a distrustful way.</p>	<p><i>Calculus-based trust:</i> a . . . calculation . . . of the outcomes resulting from creating and sustaining a relationship relative to the costs of maintaining or severing it.</p>	<p><i>Calculus-based trust:</i> Based on rational choice and characteristic of interactions based on economic exchange. Derives not only from the existence of deterrence but because of credible information regarding the intentions or competence of another.</p>
<p><i>Knowledge-based trust:</i> Knowing the other so as to be able to predict his or her behavior.</p>	<p><i>Knowledge-based trust:</i> Knowing the other sufficiently well so that the other's behavior is predictable.</p>	<p><i>Relational trust:</i> Derives from repeated interactions over time. Information available to trustor from within the relationship itself forms the basis. Reliability and dependability give rise to positive expectations of the other; emotion enters into the relationship.</p>
<p><i>Identification-based trust:</i> Fully internalizing the other's preferences; making decisions in each other's interest.</p>	<p><i>Identification-based trust:</i> Identification with the other's desires and intentions; mutual understanding so that one can act for the other.</p>	

Figure 2
A Comparison of Three Transformational Models—
Shapiro, Sheppard, and Cheraskin (1992)

Deterrence-Based Trust
Knowledge-Based Trust
Identification-Based Trust

The second basis is knowledge-based trust (KBT); this type of trust is grounded in the ability to know and understand the other well enough to predict his or her behavior. Even if the other is predictably unpredictable at times, repeated interactions and multifaceted relationships will enhance understanding of the other. This interaction strengthens the foundation of DBT and builds its own basis of trust by enhancing knowledge and predictability of the other. Finally, identification-based trust (IBT) occurs when one party fully internalizes the preferences of the other, such that he or she identifies with the other.

Figure 3
The Stages of Trust Development—Lewicki & Bunker (1995, 1996)



Source: Adapted from Lewicki and Bunker (1995).

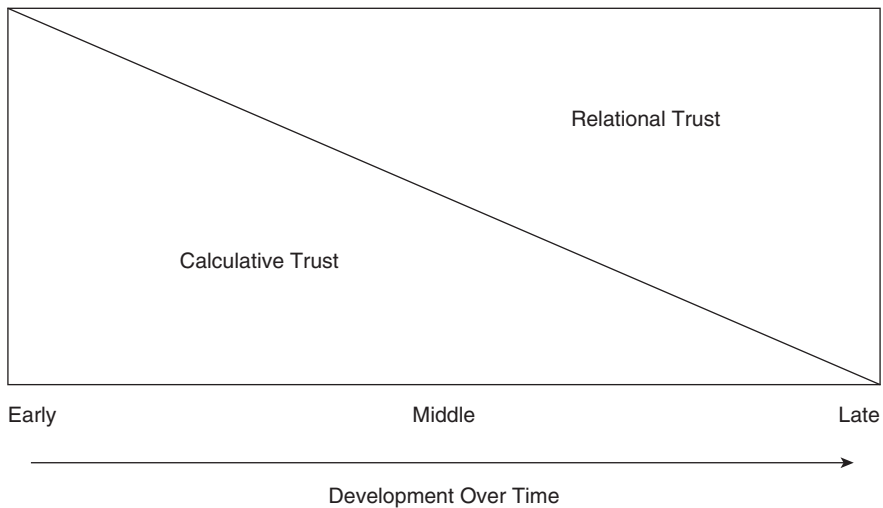
Note: J1 = At this juncture, some calculus-based trust relationships become knowledge-based trust relationships; J2 = at this juncture, a few knowledge-based trust relationships where positive affect is present go on to become identification-based trust relationships.

To our knowledge, no effort has been made to explicitly measure these three specific bases as defined by these authors. Comparable initiatives to measure related constructs will be reported in the next section.

Where does the level of trust begin? Shapiro et al. (1992) strongly suggest that trust begins with deterrence-based processes: that is, managing the potential vulnerability one could experience at the hands of the other. Moreover, their discussion of DBT suggests that trust begins “below zero”: that is, that the dominant concern at this early stage is to protect one’s vulnerability against the other. However, by describing trust as having three different bases, Shapiro et al. also imply that once there is some solid grounding for trust, the bases could coexist in various strengths and degrees in any given relationship.

What causes the level of trust to change over time? As noted earlier, they are quite explicit about the factors that increase each base of trust. They are less clear about how the bases link together, sometimes addressing the bases as separate, whereas at other times suggesting that the three bases are developmentally linked. DBT can be strengthened in three ways: repeated

Figure 4
Rousseau, Sitkin, Burt, and Camerer (1998)



interactions (enhancing the benefits of the relationship over time by enhancing each party's ability to know and predict the other's behavior), multifaceted interactions (enhancing the likelihood of trust stability by increasing the number of "points of interaction" between parties), and "reputation as hostage" (threatening the potential trust breaker with reputation damage within his or her professional network if trust is broken). KBT is enhanced by regular communication and "courtship": that is, getting to know the other; learning a great deal about the other's reputation, reliability, and integrity; and determining the "interpersonal fit" between self and other. They argue that a combination of strong DBT and KBT creates the basis for further trust building: "Pairing deterrence and knowledge can eliminate the potential harm of permitting your partner to gain knowledge about you when no deterrent exists simultaneously. . . . The two forms reinforce each other, but still require effort and vigilance" (p. 371). Thus, the successful development of KBT raises the operant trust level above zero. IBT occurs when the combined processes of deterrence and knowledge seeking lead to a full internalization of the other's preferences. IBT develops as the parties create joint products and goals, take on a common name, are collocated in close proximity, share common values, and can be further strengthened as these activities increase in frequency and intensity.

Lewicki and Bunker (1995, 1996)

Although Shapiro et al. (1992) were insightful in their effort to delineate different "bases" of trust, Lewicki and Bunker (1995, 1996) enhanced their work by broadening and strengthening the definitions and causal dynamics of each "base" and by clearly articulating the stage-wise linkage of the bases over time.

How is trust defined and measured? DBT was renamed calculus-based trust (CBT), to reflect that this type of trust is grounded not just in vulnerability but also in the benefits to be gained from various forms of transactions in relationships (e.g., Williamson, 1975, 1981). They maintained the labels for KBT and IBT. KBT is grounded in getting to know the other, understanding what the other wants and prefers, and understanding how the other thinks and responds. IBT is grounded in increasing identification with the other. The parties share and appreciate each other's desires, intentions, wants, and values. One party can serve as an agent for the other, because he or she knows that they have interests in common and one's own interests will be protected or advocated by the other. We note no substantial difference in the definitions of KBT and IBT between Shapiro et al. (1992) and Lewicki and Bunker (1995, 1996).

In a preliminary effort to measure the Lewicki and Bunker (1995, 1996) types of trust, Lewicki and Stevenson (1998) developed items representative of each of the three types. Respondents were asked to use the items in two of four possible relationships: a peer or coworker with whom the respondent had a good working relationship, a person whom he or she trusted most, someone who has seriously violated his or her trust, and someone he or she interacts with in a professional capacity. Across the different relationship types, and using both exploratory and confirmatory factor analyses, the integrity of the three-component model was confirmed. At the same time, the correlations across the three components were moderately strong, indicating that the components were part of a larger construct. For persons who were trusted most, IBT was highest, whereas for persons whom they interact with in a professional capacity, CBT was highest and IBT was low. Results regarding the nature of KBT were inconsistent. More recently, McAllister, Lewicki, and Chaturvedi (2006) reported three different studies to affirm these constructs. The first study confirmed the integrity of the three constructs, although the items loading within CBT clearly supported more of a deterrence (downside) view of CBT than a more balanced view (vulnerabilities managed and benefits enhanced). An affective-based trust construct (ABT) was also discovered (McAllister, 1995) (refer back to the "emotional subfactor" discussed earlier). However, efforts to examine how the four trust constructs varied across different forms of relationships (person you trust the most, a valued coworker, trust in a professional, and someone who has violated your trust) indicated that the CBT construct (either in a balanced form or as a deterrence form) did not maintain integrity across these relationship types and was eliminated. The second study affirmed the integrity of ABT, KBT, and IBT (CBT was not confirmed), and the third study reported longitudinal research that showed that trust develops within relationships over time and that the remaining three trust constructs predicted different trust outcomes.

Where does the level of trust begin? Lewicki and Bunker (1995, 1996) are most explicit in asserting that trust moves developmentally through the three bases within a relationship, which they define as stages. These authors present a complex graphic model of that development (see Figure 3). They make several assumptions about the development of trust in professional relationships.

First, all trust relationships begin with CBT. CBT is defined in the context of an actor evaluating the benefits and costs to be derived by staying in the relationship and the benefits and costs to be derived from cheating on or breaking the relationship (see also Deutsch, 1973). The inference here is that trust begins at zero, or even above zero, as initial

impressions of the other may infer a mildly positive CBT stance. Parties begin their encounters with the formation of CBT, through arm's-length encounters with the other where vulnerability, risk, predictability, and reliability are important issues. Repeated interactions, the degree of interdependence between the parties, and reputation as hostage serve to strengthen CBT.

Some relationships never develop past the CBT stage. This may occur for four reasons. First, the parties do not need a more complex relationship. If the transaction is with the neighborhood dry cleaner, as long as good cleaning services are provided at a fair price, no more is expected by either party. Second, the interdependence between the parties is heavily bounded and regulated. One may trust one's stockbroker, but part of this trust is grounded in the fact that the broker's actions are strongly bounded by securities industry laws and regulations (i.e., institutional trust, Rousseau et al., 1998; legalistic remedies, Sitkin & Roth, 1993). Third, the parties have already gained enough information about each other to know that the relationship is unlikely to further develop. Finally, one or more trust violations have occurred, thus making it unlikely that further trust would develop.

What causes the level of trust to change over time? The movement from CBT to KBT occurs in extended relationships, in which the parties come to know each other better. This movement occurs as parties gain more knowledge about the other and engage in activities that generate this knowledge. Repeated and varied interactions generate these data. As parties work together, talk with each other, and watch the other respond in a number of different circumstances, they "get to know the other" and learn to trust each other because the other becomes more understandable and predictable. These interactions can occur casually and unintentionally (we say hello to the attendant at the child care center in the morning, eventually coming to learn a lot about her and her family) or intensely (two people stuck in an elevator together learn a lot about each other after a few hours). The authors argue that this knowledge is a fundamental basis for trust itself, although it could also be a property of any relationship in development. Even if our increased knowledge leads us to believe that the other is "predictably untrustworthy" (i.e., when someone says "meet you at 7:00 p.m.," you know it's likely to be 7:30), this predictability enhances trust. Lewicki and Bunker (1995, 1996) represent this development as a "stagewise transition" at the point labeled J-1 in Figure 3. Many relationships do not progress beyond an enhanced KBT.

The movement from KBT to IBT is a more pronounced transition and occurs only in a small subset of relationships (reference point J-2 in Figure 3). The authors suggest that this development occurs both as the parties employ their building knowledge base to develop identification with the other and also as strong affect develops between the parties. For example, Rusbult, Weiselquist, Foster, and Witcheter (1999) suggest that close interpersonal relationships differ from "simpler" forms of interpersonal interdependence because the parties engage in a "transformation of motivation" (Kelley, 1984). Over time, the parties in close relationships shift their orientation from a focus on maximizing self-interest to a disposition toward maximizing joint outcomes. Rusbult et al. argued that trust moves through three stages: predictability (consistency of partner behavior) to dependability (reliability and honesty), and finally to a "leap of faith," grounded in "a conviction that the partner can be relied upon to be responsive to one's needs in a caring manner, now and in the future" (1999: 442).

Furthermore, “the three stages of trust are not mutually exclusive; each stage is necessary for strong feelings of trust to develop” (p. 442). These researchers presented data affirming that dependence promotes strong commitment, that commitment inspires prorelationship acts such as accommodation and willingness to sacrifice to the other, that perception of these acts enhances the partner’s trust, and that trust increases the willingness of the partner to become more dependent on the relationship (Weiselquist, Rusbult, Foster, & Agnew 1999).

Lewicki and Bunker (1995, 1996) describe these transformation points as “frame changes” (fundamental shifts in the dominant interpersonal perception paradigm) in the relationship. The shift from CBT to KBT signals a change from an emphasis on differences or contrasts between self and other (being sensitive to risk and possible trust violations) to an emphasis on commonalities between self and others (assimilation). The shift from KBT to IBT is one from simply learning about the other to a balance between strengthening common identities while maintaining one’s own distinctive identity in the relationship.

Rousseau, Sitkin, Burt, and Camerer (1998)

The authors of this third approach did not intend this to be a fully developed model of trust development. Rather, it appeared as the introduction to a special issue of *Academy of Management Review* and was intended to be an organizing framework to draw insights across a number of contributed articles to that issue and to enrich the understanding of trust across disciplines. They embrace the idea of a more complex, multifaceted view of trust and underscore the perspective advocated by Lewicki et al. (1998) that “trust has a ‘bandwidth,’ where it can vary in scope as well as degree. Trust takes different forms in different relationships—from a calculated weighting of gains and losses to an emotional response based on interpersonal attachment and identification” (Rousseau et al., 1998: 398). They thus support the idea of trust having scope and bandwidth in complex relationships, where that scope could subsume independent constructs of trust and distrust (Lewicki et al., 1998; Sitkin & Roth, 1993) and/or different bases/types of trust, such as “calculative trust” and “people trust” (Williamson, 1993).

How is trust defined and measured? These authors argue that the core elements of the scope of trust are CBT (based on rational decision processes in economic transactions in which we must “trust but verify”) and relational trust (RT) (derived from repeated interactions between trustor and trustee in which caring, concern, and emotional attachment have developed). They state that this relational trust is similar to affective trust (McAllister, 1995; McAllister et al., 2006) and IBT (Coleman, 1990). A parallel distinction is drawn by Kramer (1999b), distinguishing between a rational-choice approach and a relational approach to trust. They also specify a third construct, institution-based trust, which comprises the broad institutional supports that facilitate the development of CBT and RT in an organization context (not represented in Figure 4). These may include processes for assuring fair and consistent employee treatment and providing legal/organizational protections from capricious governmental leaders and agencies.

To our knowledge, no specific measures of their articulation of CBT or RT have been developed. Measures of institution-based trust were discussed earlier (e.g., Cummings & Bromiley’s Organizational Trust Inventory, 1996).

Where does the level of trust begin? Addressing many of the earlier approaches to trust discussed in this article, Rousseau et al. (1998) dismissed the earlier Shapiro et al. (1992) construct of DBT, suggesting that initial trust is not a control mechanism against vulnerability but instead a substitute for control. Initial trust, they argue, is much like the Low Trust, Low Distrust cell of the Lewicki et al. (1998) article, or “zero trust.” The strong implication is that trust begins with CBT, because it involves the simplest of utilitarian calculations about benefits to be derived from trust and the concurrent vulnerability associated with it.

How does the level of trust change over time? The level of trust is posited to change through repeated interactions. Rousseau et al.’s (1998) diagram (Figure 4) implies that any repeated or complex interaction between the parties is likely to begin the development of RT. As these repeated interactions occur, trust develops from within the relationship itself, rather than from external validations of the risks of trusting the other. As they specify,

Reliability and dependability in previous interactions with the trustor give rise to positive expectations about the trustee’s intentions. Emotion enters into the relationship between the parties, because frequent, longer-term interaction leads to the formation of attachments based upon reciprocated interpersonal care and concern (McAllister, 1995). (For this reason, scholars often refer to this form of trust as “affective trust” [McAllister, 1995] and as “identity-based trust” [Coleman, 1990].) (Rousseau et al., 1998: 399)

The implication from their diagram is that as relationships develop, RT proportionally increases, and CBT proportionally decreases. We note that in making these statements, Rousseau et al. (1998) subsumed IBT and affective trust (AT) under the same umbrella; as we noted earlier, others have argued that these are discernibly different constructs.

Missing Data or Missing Thinking? Unresolved Issues and a Research Agenda

Although it is clear from this review that theorizing and empirical research on trust development has made significant strides during the past decade, there is considerable work left to be done. We now turn our attention to discuss the major issues and questions that arise as a result of this review and propose a future agenda for research on trust development. This section is organized around the following prominent questions: (a) What are the defining features of trust? (b) What are the gaps in current approaches to trust measurement? (c) How can we capture trust development and dynamics over time? and (d) How should researchers talk about the “optimal” level of trust?

What Are the Defining Features of Trust?

A number of reviews on trust (e.g., Bigley & Pearce, 1998; Rousseau et al., 1998) have commented on the diversity of definitions and the component elements of trust. Indeed, as noted in this article, trust has received research attention across multiple disciplines that have differed in their definitions and approaches. This is not the place to review all these definitions and approaches, nor is it a new problem. For example, Mayer et al. (1995), whose definition

of trust and specification of its component elements has probably been one of the most robust, lamented the same problem more than a decade ago. It is encouraging to note that our review, as well as a broader review of dominant definitions (Bigley & Pearce, 1998; Rousseau et al., 1998), reveals some considerable convergence on the central elements of trust. These include "positive" or "confident" expectations about another party and a "willingness to accept vulnerability" in the relationship, under conditions of interdependence and risk (e.g., Bigley & Pearce, 1998; Hosmer, 1995; Kramer, 1999b; Mayer et al., 1995; Rousseau et al., 1998; Zand, 1972). This increasing convergence, although by no means absolute or indicative of a single accepted definition, is promising.

What Are the Gaps to Trust Measurement?

Further attention to the development and validation of measures of trust is warranted and is integrally tied to the definitional problem. Many studies employ measures of trust that are inconsistent with their chosen definition (Gillespie, 2003). For example, within the unidimensional approach, many studies define trust in terms of confident expectations and a willingness to be vulnerable and yet proceed to measure only expectations (typically in the form of beliefs about the other party's trustworthiness).⁴ From the behavioral tradition, although expectations are central in the definition, measurement typically focuses only on "cooperative behavior" as a proxy for trust. Hence, even with increasing convergence on the defining elements of trust, unless measures are used that accurately operationalize these defining elements, the problem of comparing and synthesizing across studies remains.

Researchers should ensure a close match between their trust definition and measures. Recent reviews comparing and evaluating different validated measures of trust will assist researchers in the appropriate choice of validated measures consistent with their chosen definition (see Dietz & den Hartog, in press; McEvily & Tortoriello, 2005). These reviews may also help to overcome another area of fragmentation in the literature, namely, that there is very little consistency or overlap in the use of trust measures. McEvily and Tortoriello (2005) found in their review of 119 trust measures that the large majority of scales had only been used once, and only 11 had been used in more than one study. Furthermore, these 11 measures were used in only one third of studies reviewed, suggesting little replication. This fragmentation is partly due to the wide diversity of trust targets (e.g., subordinates, managers, peers, team members, boundary spanners, etc.) and the use of items in some scales that are difficult to generalize to other targets and contexts. The use of well-validated instruments will help reduce this fragmentation and better enable the comparison and integration of results and ultimately a cumulative body of knowledge on trust to emerge.

Finally, in their review of trust measures, McEvily and Tortoriello (2005) reported that most trust scales provide little information about construct validity, making it difficult to evaluate how accurately they capture trust. They conclude that only five trust measures appropriate to organizational relations have been well validated and developed with care. Their critique does not extend to the more complex challenges of exploring whether trust and distrust can be measured separately as two factors, each with its own construct validity (the two-dimensional model) or that different types of trust (e.g., CBT, KBT, IBT) can be cleanly

measured as a relationship develops, transforms over time, or increases in bandwidth. We have noted some efforts to move in this direction, but much work remains.

How Can We Capture Changes in Trust Over Time?

We believe that the current literature on trust development also suffers from a problem of significant measurement deficiency. Although the definitional and measurement issues discussed so far are relevant for both static snapshots of trust and trust development, additional issues also need to be considered to meaningfully capture changes and dynamics in trust over time.

The most widely used method in the extant literature within a psychological approach is a Likert-type scale, where a numeric indicator of the strength of one's trust is solicited, although the rich meaning that may be latent behind the number is inaccessible. How a rating of 3 or 4 on a 5-point scale captures the complexity of components that go into a judgment of trust, and particularly of the dynamics and changes in trust over time, is lost by the primitiveness of the measure. This method also restricts the range of responses to those pre-defined by the researcher.

Therefore, we encourage researchers to consider employing complementary methods. Promising qualitative methods that are particularly suitable for tracking relationships over time and assessing the dynamics and development of trust include diary accounts and narratives (e.g., Baumeister, Stillwell, & Wotman, 1990), critical incident techniques (e.g., Shamir & Lapidot, 2003), in-depth interviews (e.g., Butler, 1991), and case studies and communication analysis (e.g., Jarvenpaa & Leidner, 1999; Wilson, Straus, & McEvily, 2006). For example, rich, textured, and novel insights about trust were revealed by Kramer (1996) through the content analysis of autobiographical narratives. In this study, dyads were asked to recall and describe all the significant incidents and behaviors they felt affected the level of trust between them. Such qualitative methods have high external validity and allow insight into the way that trust is socially and subjectively constructed. To limit problems of internal validity inherent in such methods, we suggest these methods are triangulated with survey data.

Although many behavioral laboratory studies aim to measure trust development, these studies are typically short and episodic, focused on calculative market transactions, and often infer trust development from very few measurement points. There is a need for further quantitative and qualitative work in complex field settings that assesses the nature and level of trust at several time periods, sufficiently spread out to enable meaningful changes in trust relations to be captured (good examples include Dirks, 2000; Robinson, 1996; Shamir & Lapidot, 2003). Such studies need to anticipate and take steps to reduce the possibility of "noise" variables between measurement points that could confound the results. These research designs have great scope to advance understanding of trust development over time. It would be interesting to compare the results of laboratory and fieldwork methods that examine the same relationships, to determine whether repeated-measure laboratory studies maintain validity and generalizability.

Longitudinal and qualitative techniques are particularly well suited for examining the propositions underlying the transformational and two-dimensional model. For example, if

trust truly transforms from calculus based to identification based, as the transformational model suggests, then such changes are unlikely to be detected in transactional contexts typical of behavioral laboratory experiments or through simple survey measures. Longitudinal qualitative techniques are also more likely to reveal insights into the development of facets and bandwidth in relationships and the coexistence of trust and distrust in complex, interdependent relationships.

How Should Researchers Talk About the Optimal Level of Trust?

Given the centrality of trust in resolving conflicts (Axelrod, 1984) and promoting social order (Lewis & Weigert, 1985; Luhmann, 1979), much of the literature within the unidimensional approach assumes that trust is inherently good, and the more trust the better. Similarly, given the deleterious effects associated with distrust, it is often assumed that distrust is inherently bad (e.g., a psychological malady in need of treatment; Erikson, 1963). Research shows that the effects of distrust are much more catastrophic and disproportionate than for trust (Burt & Knez, 1996).

Yet other approaches are much more cautious about this prescription. A primary tenet of the two-dimensional model is that some distrust can be functional and even healthy in certain circumstances, particularly when there are valid reasons to suspect that another party is not trustworthy within the broader bandwidth of a relationship. Several authors argue that high trust creates a "blindness" that can allow the trustor to be exploited and taken advantage of (e.g., Deutsch, 1958; Elangovan & Shapiro, 1998; Kramer, 1996; Wicks, Berman, & Jones, 1999) and that a certain amount of "prudent paranoia" is appropriate in a relationship (Kramer, 1996). Atkinson and Butcher asserted that "there is an emerging role for distrust in creating organizational change and 'healthy' intra-organizational competition [cites omitted]" (2003: 286). Too much trust can be damaging also, as "overgeneralized" trust may set the stage for highly trusted yet undermonitored employees to either exploit trust relationships or, at the organizational level, to engage in crimes against their organization (Granovetter, 1985). Earlier work by Luhmann (1979) suggested that the best conditions exist when there is a healthy dose of both trust and distrust.

It may be that trust operates similar to levels of conflict within groups. Researchers who have studied conflict and group dynamics have regularly noted that too much or too little conflict in a group is dysfunctional (e.g., Cloke & Goldsmith, 2000; Moscovi & Doise, 1994). Parallel work is needed to determine whether the relationships between trust and positive outcomes are curvilinear and/or whether the two-dimensional models of trust and distrust can better account for situations where blind trust is dysfunctional but informed trust is more adaptive. For example, a recent study by Langfred (2004) suggests that too much trust in the context of self-managing teams is not a good thing and identifies that high trust can lead to a reluctance to peer monitor, which when combined with high individual autonomy, can lead to impairments in team performance.

Further research in this area is warranted and will require researchers to discriminate among relatively high levels of trust and identify the differential contexts and moderating factors in which high trust levels produce dysfunctional consequences and distrust can produce

beneficial outcomes. The transformational model further suggests that the “optimality” question cannot be answered independent of the relationship in which it is being judged, raising the nature of the relationship (e.g., dominated by economic transactions and exchanges vs. closer personal relationships) as a potential moderator of the optimal level of trust and distrust in the relationship.

Summary

The research literature on interpersonal trust has enjoyed a 50-year history. Yet at the end of that half-century, although a great deal has been learned, considerably more remains to be determined. In this article, we have reviewed the existing literature on trust development. We divided this literature into four approaches: a behavioral approach, which focuses on rational choice cooperative behavior, and three psychological approaches, which probe the complex intrapersonal states associated with trust, including expectations, intentions, affect, and dispositions. Within each approach, we addressed that literature by asking three questions: How has trust been defined and measured? At what level does trust begin? and What causes the level of trust to change over time (i.e., how does trust grow and decline)? Our discussion of these approaches has sharpened the future research agenda. This work will require a better understanding of the nature of “simple” versus “complex” trust as it occurs in different types of interpersonal relationships, improved processes for defining and calibrating both the complex elements of the trust construct and ways they can be measured over time, and integration of this work into the expanding literature on trust repair. This agenda offers ample opportunities for rich new theoretical and empirical contributions, and we invite those interested in trust to directly engage this agenda in their work.

Notes

1. The psychological approach distinguishes between trust in a specific party and a generalized disposition or attitude to trust others generally, that is, trust as an individual difference. These trusting dispositions are grounded in personality and early childhood experiences. For example, Rotter (1967, 1971) argued that individuals come to form generalized expectancies to either trust or distrust others. Others suggest that one’s predisposition to trust explains trust in initial interactions before the trustor has had the opportunity to gain more specific information regarding a particular trustee. McKnight, Cummings, and Chervany argued that this disposition to trust is grounded in a value-based faith in humanity and a “trusting stance” grounded in the assumption that “things turn out best when one is willing to depend on others” (1998: 478). A generalized disposition to trust is typically viewed as an antecedent in establishing an initial level of trust between two specific parties (e.g., Dirks & Ferrin, 2002; Mayer, Davis, & Schoorman, 1995).

2. These authors define complex relationships as characterized by different facets of interaction—components of experience that an individual has with another in various contexts. Facets are aggregated over time into bands or groupings of interactions that come to define the complexity of our experience with a single individual. The broader the experience across multiple contexts, the broader the bandwidth.

3. It also remains an empirical question as to whether the global judgments of *trust* and *distrust*, across the bandwidth of a relationship, sum to a single judgment of level of trust for the other. Although Lewicki, McAllister, and Bies (1998) suggested that the proper answer to the question “do you trust another?” should be “to do what?” (i.e., in the broader context of the bandwidth of the relationship), research should focus on the conditions under which

individuals offer the simplest (“yes” or “no”), more complex (“generally, yes” or “to some degree”), or most complex (“to do what, in what context?”) answer to that question.

4. This is likely to be due to a lack of psychometrically sound measures for assessing “the willingness to be vulnerable.” Two notable exceptions are the 5-item measure recently revised by Mayer and Gavin (2005) and a 10-item measure developed and validated by Gillespie (2003). This latter measure distinguishes two dimensions of trust: reliance (willingness to rely on another’s work-related skills and knowledge) and disclosure (the willingness to disclose sensitive information).

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