

Trust, Norms, and Cooperation: Development and Test of a Simplified Model

Francis L. Jeffries
University of Alaska, Anchorage
and
Thomas E. Becker
University of Delaware

Abstract

Trust at the interpersonal level in organizational settings has been researched extensively, yet little has been learned about the process through which trust affects cooperation and of the role of the social context in this process. Further, the models most often cited are complex and difficult to operationalize. This study investigates the effects of trust, subjective norms, and intent to cooperate on cooperative behavior using a simplified model. The findings demonstrate that the simplified model is useful for understanding the link between trust and cooperation and underscore the importance of perceived norms in the process. Implications for management are discussed.

Introduction

A concise definition of trust is, “confident positive expectations regarding another’s conduct” (Lewicki, McAllister, & Bies, 1998: 439). Trust is of great interest to organizational scholars in many fields (e.g., Andersenn, 2005; Butler, 1995; Chowdhury, 2005; Currall & Judge, 1995; Dyer & Chu, 2003; Gill, Boies, Finegan, & McNally, 2005; Kramer & Tyler, 1996; Morrow, Hansen, & Pearson, 2004; Ross & LaCroix, 1996, Williams, 2001). One reason for this interest is the belief that trust in the workplace has important implications for the outcomes of individuals, groups, and organizations. Hosmer (1995) noted that trust is essential for understanding interpersonal and group behavior, economic exchange, managerial effectiveness, and social stability. Others have emphasized the role of trust in teamwork (Jones & George, 1998), risk-taking and outcomes in work relationships (Mayer, Davis, & Schoorman, 1995; Mesquita, 2007), the choice of governance structures (Chiles & McMackin, 1996), responses to crisis and downsizing (Mishra, 1996; Mishra & Spreitzer, 1998), and an organization's competitive advantage (Jones, 1995). In general, this theoretical work suggests that trust leads to better work relationships, improved decision making, and enhanced organizational effectiveness.

Empirical studies have validated many of these claims. For instance, in a study of 344 automaker-supplier relationships Dyer and Chu (2003) found that trust was correlated to reduced transaction costs ($r = .66$) and greater information sharing. Further, the costs of doing business with suppliers for the least trusted automaker were nearly six times higher than those for the most trusted. Costa (2003) found that trust improved team

effectiveness ($r = .17$). For trust to produce the kinds of outcomes identified above, cooperation must occur. For example, effective teamwork requires that people work together for mutual gain (Guzzo & Shea, 1992; Lämsä & Pučėtėitė, 2006) and successfully dealing with an organizational crisis mandates widespread cooperative behavior (Webb, 1996). In these instances and others, cooperation means working with others for common good and includes behaviors such as sharing information, voluntarily helping others, and seeking mutually satisfactory solutions to problems (McAllister, 1995; Mesquita, 2007; Neale & Bazerman, 1991; Williams, 1993). Organizational theorists have long recognized that trust may promote cooperation between individuals in organizations (Barnard, 1938; Blau, 1964; Deutsch, 1962, 1973), and recent scholars continue to herald this point (DeCremer & Dewitte, 2002; Mesquita, 2007; Williams, 2007). In the end, it is trust between individuals that underlies and supports the favorable outcomes that accrue at the various levels of analysis.

Despite what has been learned, there are three critical shortcomings to the current knowledge of trust and cooperation at the interpersonal level of analysis. First, much of the recent trust literature has been purely theoretical and the process through which trust affects cooperative behavior has not been thoroughly examined empirically. Second, much of the literature assumes that trust must lead to a high degree of cooperation. For instance, behavioral decision theorists have operationalized trust as cooperative conduct, in effect treating trust and cooperation as one and the same (Arrow, 1974; Axelrod, 1984; Coleman, 1990; Fang, Kimbrough, Valluri, & Zhiqiang, 2002; Ho & Weingelt, 2005). However, a person can trust another individual and yet decide not to cooperate with him or her (Hwang & Burgers, 1997). For example, an employee may not collaborate with a trusted co-worker on a certain task because the employee has another higher priority task to complete. Employees may also cooperate with others when trust is low because the refusal to cooperate will be punished or due to ambivalence, ulterior motives, or other's expectations (Cook, Hardin, & Levi, 2005; Miller, 1992; Mayer et al., 1995; Ross & LaCroix, 1996).

The social context in which trust and cooperation occur has also been slighted (Lämsä & Pučėtėitė, 2006). The neglect of social context is significant because, as noted early on by Deutsch (1962), an individual's decision to cooperate is often influenced by the judgments and behaviors of others. However, there has been a lack of research on this topic and recent authors have called for greater inclusion of social factors, especially social norms, in the study of trust (Currall, 1992; Lämsä & Pučėtėitė 2006; Lewicki, et al., 1998; Miller, 1992; Thomas, 1992; Williams, 2001).

There have been a number of models developed at the interpersonal level of analysis with the potential to address many of the issues identified above (e.g., Mayer, et al, 1995; Jones & George, 1998; Ross & LaCroix, 1996; Williams, 2001). These models explain, in theory, important issues and relationships between variables that impact the outcomes they predict. While they are helpful in this respect, the models are far from parsimonious (containing from eight to seventeen variables). This makes it difficult to conduct research that can adequately test the models and may hinder their practical application. Indeed, a review of the literature citing the models shows that empirical

research using them is scarce. So, while these models help us to understand trust, they are apparently so complex that they are rarely scientifically tested or used in management practice. This demonstrates a need for a more parsimonious model that can be effectively used in empirical studies and applied in practice.

In summary, this study will develop and test a simplified model that will clarify and validate the distinction between trust and cooperation at the interpersonal level, include a social context variable within the model, and explain the links between trust, a contextual variable, and cooperation. The remainder of the paper will be presented as follows; model development, methodology of the study, presentation of results, and discussion.

Part of the data described in Jeffries (2002) were also used in this study. The research question of the 2002 article was: How do dispositional trust and subjective norms influence initial trust development? The research question of the current article is: How do attitudinal trust and subjective cooperative norms influence cooperation? The overlap in the data is limited to the subjective norms measure.

Model Development and Hypotheses

The Theory of Reasoned Action and Our Conceptualization of Trust

To develop our model of trust and cooperation we drew upon Fishbein and Ajzen's (1975) theory of reasoned action. This theory was chosen as a starting point because it has demonstrated predictive utility in many situations and across a large variety of behaviors (Prestholdt, Lane, & Mathews, 1987; Sheppard, Hartwick, & Warshaw, 1988). It is still widely used in current research across a wide range of disciplines for example: ethics in business (Buchan, 2005), psychology (Dodge & Jaccard, 2007), education (Highhouse, Lievens, & Sinar, 2003), management (Schreurs, Derous, De Witte, Proost, Andriessen, & Glabeke, 2005), and computer information science (Woolley & Eining, 2006). It also incorporates a social dimension of behavior, namely subjective norms, and it is simple, valid, and robust.

The theory of reasoned action holds that a person's intention to engage in a behavior is the most proximate determinant of that behavior (see Kraus, 1997 for a relevant meta analysis). This is important because, in spite of its demonstrated relationship to behavior, behavioral intention is absent from major models of trust (e.g., Lewicki, et al., 1998; Mayer, et al, 1995; Jones & George, 1998; Ross & LaCroix, 1996; Williams, 2001). Behavioral intention is, in turn, determined by attitude toward the behavior and subjective norms regarding the behavior. Attitude toward the behavior is the degree to which a person has a favorable or unfavorable evaluation of the given behavior. This attitude is a function of (a) the expectation that engaging in the behavior will lead to certain consequences, and (b) the person's evaluation of those consequences. Subjective norms reflect the perceived social pressure to engage in the behavior. Subjective norms are a function of (a) the belief about whether other people, whose opinions are relevant in a given context, think the person should engage in the behavior,

and (b) the person's motivation to comply with the others in that context. There is support for inclusion of subjective norms in models of trust and cooperation found in the trust literature. Williams (2001) alludes to subjective norms with her inclusion of social group membership within the organization in a model of initial trust and cooperation. De Cremer and Dewitte (2002) include the concept of subjective norms in their discussion of trust calling them situational norms that are context specific and are influential in gaining compliance in high accountability situations. However, they did not test for the effect of norms in their research.

For current purposes, we made one important modification to the theory of reasoned action. A strict application of the theory requires adherence to the principle of compatibility, that is, that all of the elements (attitude, subjective norms, intention, and behavior) have an identical focus (Ajzen & Fishbein, 1980). If the focal behavior is cooperation, then the relevant intention is intent to cooperate, the relevant subjective norms are norms regarding cooperation, and the relevant attitude is attitude toward cooperation. We adopted the principle of compatibility for the behavior, intention, and subjective norm elements, but relaxed the requirement for the attitude element. Specifically, the modification was to use the concept of trust in place of attitude toward cooperation.

We made this modification because one of our central goals is to explain the relationship between trust and cooperation, and because we believe that an attitude toward cooperation is included within the kind of trust we were interested in studying. To grasp this latter point, two related principles must be understood. First, there is an attitudinal character to trust (Jones & George, 1998, Lämsä & Pučėtaitė, 2006). An attitude is an evaluation of a specific entity (Ajzen & Fishbein, 1980; Kim & Hunter, 1993). One's attitude toward a given entity can be affected by personality traits, prior experiences, environmental factors, and characteristics of the attitude object (McGuire, 1985). As Whitener and her colleagues explained, "Trust can be viewed as an attitude held by one individual – the trustor – toward another – the trustee. This attitude is derived from the trustor's perceptions, beliefs, and attributions about the trustee, based upon his or her observations of the trustee's behavior" (Whitener, Brodt, Korsgaard, & Werner, 1998: 513). Several prior researchers have explicitly recognized trust as an attitude (Currall & Judge, 1995; Lämsä & Pučėtaitė, 2006; Read, 1962; Robinson, 1996). Others have implicitly recognized the attitudinal nature of trust by studying "trust beliefs" or "trust expectations" involving evaluations of another's trustworthiness (Butler, 1999; De Dreu, Giebels, & Van de Vliert, 1998; O'Reilly & Roberts, 1974; Thomas, 1992).

Second, it is likely that the evaluative beliefs comprising one's attitude toward cooperation are encompassed within trust expectations. As noted previously, attitudinal trust is defined in terms of confident positive expectations regarding another's conduct. These trust expectations include the perceived probability that cooperating with a target person will lead to positive outcomes (such as the person acting cooperatively in return) rather than negative ones (such as the person seeking short-term, one-sided gain) (Lewicki, et al., 1998; Miller, 1992; Zand, 1972). Similarly, per the theory of reasoned

action, an attitude toward cooperation is a function of the beliefs that cooperating with the target person will lead to desirable, and not undesirable, outcomes. Thus, the evaluative beliefs that make up one's attitude toward cooperation are included within trust expectations.

In sum, an attitude toward cooperation appears to be nested within attitudinal trust. Because there is a need to examine the process that links trust and cooperation, we decided to replace attitude toward cooperation with attitudinal trust in our model. There is a risk to making this decision: by violating Fishbein and Ajzen's principle of compatibility, we may reduce "attitudinal relevance" (i.e., the match among the foci of concepts within the theory) and, thus, potentially hinder the model's ability to predict behavior. On the other hand, a meta-analysis by Kraus (1997) found that although models that conform to the principle of compatibility generally have larger effect sizes, studies where the principle is not strictly adhered to have consistently produced substantial and significant effect sizes predicting specific behavior. Kim & Hunter (1993) provide additional evidence that predictive validity remains substantial even in the face of low to moderate levels of attitudinal relevance. Thus, our approach appears reasonably well-established and is supported by prior research. In the final analysis, whether our modification prohibits prediction of cooperation is an empirical question that can be answered by our results.

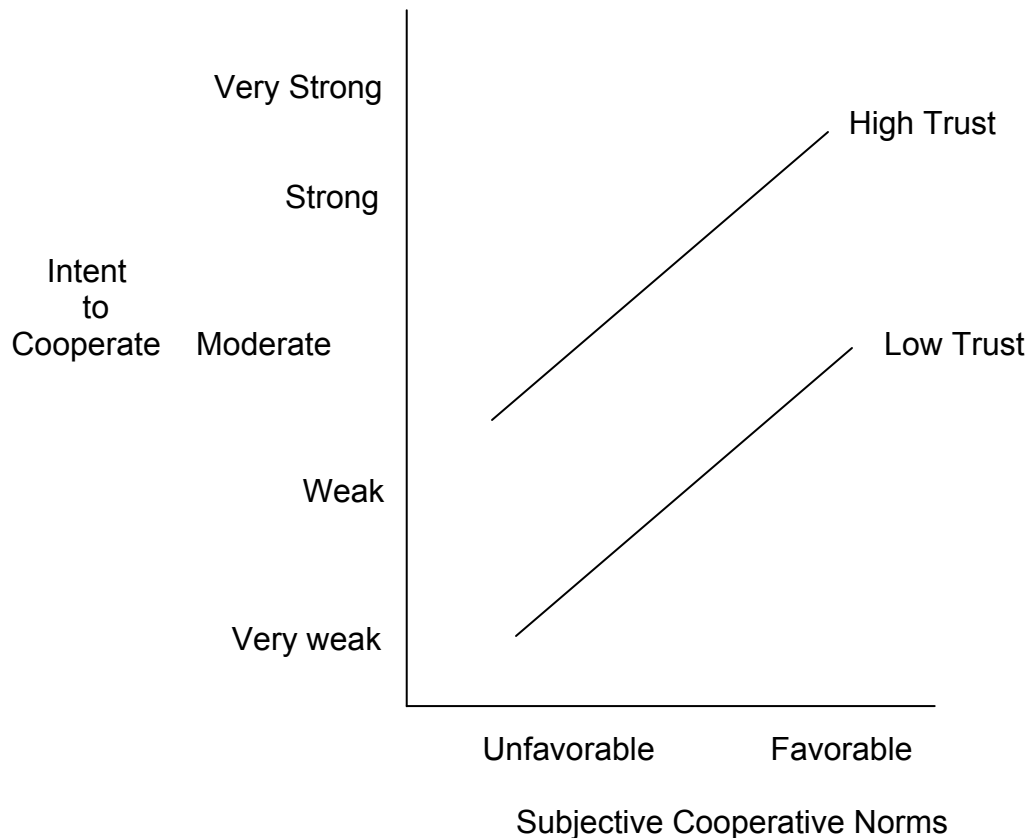
Attitudinal Trust and Subjective Cooperative Norms

An individual who trusts a target person believes that cooperating with the target will have positive consequences. *Ceteris paribus*, the individual should generally intend to cooperate with the target. However, due to subjective norms, trust is most likely not solely responsible for developing a strong intent to cooperate. With respect to cooperative behavior, the concept of subjective norms refers to the perceived social pressure to engage in cooperation and one's motivation to comply with this pressure. With few exceptions (Currall, 1992; Currall & Judge, 1995; Doney, Cannon, & Mullen, 1998), perceived norms have been noticeably absent from discussions of the trust – cooperation relationship. This is an important omission because including this concept in trust models can explain why trust at the interpersonal level in organizations may not lead to high levels of cooperation and why cooperation may occur in situations where trust is low.

Following the theory of reasoned action we posited main effects, with no interactions. When perceived social or organizational norms act against cooperation, high levels of trust may produce only a weak or moderate intent to cooperate. For instance, in a business unit characterized by high cohesiveness and a norm for hoarding resources, employees may trust people outside the unit but, nonetheless, not be greatly motivated to cooperate with them. Conversely, when trust is low, individuals may choose to cooperate anyway if they perceive strong norms for cooperation. This is because strong subjective norms for cooperation could lead to moderate or even strong intentions to cooperate due to sanctions for refusing to cooperate or valued rewards for cooperation. Of course, if subjective norms are unsupportive of cooperation and trust is

Figure 1

Proposed Main Effects of Attitudinal Trust and Subjective Cooperative Norms



low, one would expect very weak intentions to cooperate. If subjective norms are supportive and trust is high, we would predict very strong cooperative intentions (see figure 1). In sum:

Hypothesis 1: Controlling for subjective norms, attitudinal trust affects the intent to cooperate such that greater levels of attitudinal trust lead to a greater intent to cooperate.

Hypothesis 2: Controlling for trust, subjective cooperative norms affect the intent to cooperate such that more favorable subjective norms lead to a greater intent to cooperate.

Cooperative Intentions

Intent to engage in a behavior is typically a valid predictor of that behavior (Ajzen & Fishbein, 1980; Kraus, 1997; Sheppard, et al., 1988). To our knowledge, Currall and Judge (1995), Mayer et al. (1995), and McKnight, Cummings, and Chervany (1998) are the only prior theorists to include intentions in their models of trust. In these models, beliefs about the benevolence, honesty, and competence of others lead to trusting intentions, whereby “one is willing to depend on the other person” (McKnight, et al., 1998, p. 474). Our conceptualization and operationalization of intentions is different in two ways. First, we see intentions as synonymous with goals. That is, saying, “I intend to do such-and-such” is much the same as saying, “My goal is to do such-and-such.” This is a more active and definite statement than saying, “I am willing to do such-and-such,” because one can be willing to do something without meaning to act on that willingness; e.g., saying “I am willing to work late” does not necessarily mean one’s goal is to work late. Second, consistent with the principle of compatibility (Ajzen, 1989) and related research (e.g., Becker, Randall, & Riegel, 1995; Budd, 1986; Fishbein & Stasson, 1990), we assert that intentions are more likely to predict behavior if the intention and behavior have the same focus. Therefore, intent to cooperate is likely to be a better predictor of cooperation than would be “trusting intentions.” Thus:

Hypothesis 3: Intent to cooperate affects cooperative behavior such that the greater intent to cooperate the greater the cooperative behavior.

Finally, we expect that attitudinal trust and subjective norms will not have direct effects on cooperative behavior. The theory of reasoned action holds that an intention is the direct precursor to volitional behavior because such behavior cannot occur until a deliberate purpose is formed. Therefore, more distal determinants, such as external events, personality, attitudes, and norms, affect behavior only through intentions. As a result, we predict that intent to cooperate will completely mediate the effects of trust and subjective norms on cooperation. Thus:

Hypothesis 4: Intent to cooperate fully mediates the effects of attitudinal trust and subjective norms on cooperative behavior.

Methods

Participants

One hundred seventy-six people from management and sociology courses at a northwestern university volunteered to participate in our study; 2.3 percent of participants were freshmen, 4.5 percent sophomores, 54.5 percent juniors, and 38.6 percent seniors. The average age of participants was 22.0, and 51.7 percent of participants were female; 56.3 percent of participants were employed. Extra-credit in an amount equal to 1.5 percent of the total points for the courses was provided as an incentive to participate. All students from the classes invited to participate did so. Those classes were chosen on the basis of the instructors being willing to allow the

researchers access to request participation and to offer the extra credit as an incentive to participate in the study. Although this was to some degree a convenience sample, we attempted to reduce systematic selection biases by including participants from different academic disciplines.

Procedure

Prior to arriving at the lab, participants in the study completed a survey measuring age, gender, and class standing. When they arrived, participants were randomly assigned to dyads. The study consisted of two business simulation exercises. The first exercise was a warm-up to allow participants to get acquainted with each other and to promote the formation of attitudinal trust. It was important to have participants engage in a warm-up exercise because it has been shown that attitudes formed by direct experience with another are more predictive of behavior than those which are not (Kraus, 1997). Our warm-up was a variation of the ultimatum bargaining game developed by Guth, Schmittberger, and Schwarze (1982), and lasted about 10 minutes. This procedure is consistent with previous work that has found that meaningful levels of trust can develop in simulated business settings in short periods of time (e.g., Butler, 1995; DeDreu et al., 1998; Gill, et al., 2005; Macy & Skvoretz, 1998). The exercise required participants to decide how to divide ten numbered tickets between them, with each ticket representing one chance to win \$50 in a drawing. One participant, randomly chosen from each pair, offered the second participant from 0 to 10 tickets. The second participant decided to accept or reject the offer. If he or she accepted the offer, the two participants split the tickets accordingly. If the second participant rejected the offer, neither person got any tickets. Following the end of this exercise, participants completed measures of trust, subjective cooperative norms, and cooperative intentions.

The second, primary exercise consisted of a business simulation developed by Kelley (1966) involving the sale of three commodities in a business environment. One person in each dyad was randomly assigned the role of buyer and the other the role of seller. The buyer acted as a representative of a chain of department stores. His or her job was to buy televisions, typewriters, and vacuum cleaners from the seller so that, upon resale, the buyer's company would make a profit. The seller acted as a representative of a wholesale distributor of electric appliances. His or her job was to sell the three appliances to the buyer so that the seller's company would make a profit. Participants were informed of the maximum possible profit for the respective roles and were able therefore to assess their performance in absolute (total profit) and relative terms (as compared to the total possible profit). The exercise was structured so that there were opportunities for mutual gain. While no formal time limit was imposed, all negotiating dyads completed this exercise in less than 15 minutes. There was no formal incentive offered for participation in the exercise. However, in a short debrief after the exercise, the participants were asked to indicate their level of involvement. They stated that the role play was engaging, that they were interested in earning a good "profit" from the interactions, and they were comparing their results with others to see how they performed relative to the others in the exercise.

At the conclusion of the exercise, cooperative behavior was measured. We measured cooperative behavior at the end of the exercise because that was when participants had the most complete information for evaluating the level of cooperation of the other person.

Measures

Responses to all the following measures were given on a five-point scale from 1 = strongly disagree to 5 = strongly agree. Scale scores were created by averaging across items. The scales for subjective norms, intent to cooperate, and cooperative behavior were developed for this study because no existing scales were found that were suitable for our needs. Further information on item development and complete versions of all scales (containing all items) are available from the first author.

Attitudinal trust

Trust toward one's partner was measured using a slightly modified version of the eight-item scale developed by Larzelere and Huston (1980) to fit the context. Past research has demonstrated that the scale is unidimensional, reliable, relatively free from response biases, and pertinent to dyadic relationships in business contexts (Kumar, Scheer, & Steenkamp, 1995; Larzelere & Huston, 1980; Martin, Anderson, Burant, & Weber, 1997; Möllering, Bachmann, & Lee, 2004; Morgan & Hunt, 1994; Zak, Gold, Ryckman, & Lenney, 1998). We opted for this measure over others because we wanted a short but psychometrically sound measure. This is consistent with prior researchers who have demonstrated the value and validity of unitary measures of trust (Gill, et al., 2005; Huff, Cooper, & Jones, 2002; Malthora & Murnigan, 2002; Morrow, et al., 2004). Examples of items are (1) I feel that I can trust my partner completely, (2) My partner is perfectly honest and truthful with me, and (3) My partner treats me fairly and justly.

Subjective cooperative norms

A five-item measure of subjective norms was developed using the guidelines provided by Ajzen and Fishbein (1980) and Ajzen and Madden (1986). Examples of items are (1) Most people who are important to me think that reciprocating another's attempt to begin communication is good, (2) Most people who are important to me think that withholding information to gain an advantage is all right (reverse-scored), (3) Most people who are important to me think threats are an effective way to influence others (reverse-scored).

Cooperative intentions

An eleven-item measure of intent to cooperate was developed using previously developed guidelines (Ajzen & Fishbein, 1980; Ajzen & Madden, 1986). Examples of items are (1) If asked for information, I intend to provide the requested information, (2) I intend to use threats to gain an advantage (reverse-scored), and (3) I intend to give the other person all the time s/he needs to respond.

Cooperative behavior

The Ajzen and Fishbein (1980) guidelines were used to develop an eight-item scale to measure cooperative behavior. In order to reduce concerns for method variance and

self-serving biases, we used partners' ratings of cooperation. Research in the area of trust has shown individual perceptions of another's behavior to be pertinent to the development of trust (Costa, 2003; Coletti, Sedatole, & Towry, 2005; Dyer & Chu, 2003; Huff, et al., 2002; Morrow, et al., 2004; Williams, 2007). Consistent with this research, we believed partner assessments to be especially relevant because it is these assessments which likely influence partner reactions and affect the maintenance of trust in future interactions. Examples of items are (1) My partner offered information that was useful to me, (2) My partner was willing to seek mutually beneficial solutions, and (3) My partner was cooperative.

Analysis Strategy

To evaluate discriminant validity, LISREL (Jöreskog & Sörbom, 2001) was used to conduct confirmatory factor analyses of items measuring attitudinal trust, norms, intentions, and behavior. To this end, seven measurement models were developed. The first, four-factor model, specified attitudinal trust, subjective norms, cooperative intentions, and cooperative behavior as latent variables. The remaining models were all possible three-factor models combining across two variables (trust – norms, trust – intentions, etc.). The four-factor model was then compared to the other models using fit indices and significance tests. The root-mean-square residual (RMR), comparative fit index (CFI), and the incremental fit index (IFI) were used as goodness of fit measures because evidence suggests they are unbiased and relatively independent of sample size (Bentler, 1990; Bollen, 1989). Steiger's (1990) root-mean-square error of approximation (RMSEA), recommended by Browne & Cudeck (1992), was also calculated. The RMSEA measures fit per degree of freedom, with a value of .05 indicating a close fit of the model to the data (Browne & Cudeck, 1993). LISREL provides a test of the hypothesis that the RMSEA in the population is equal to or less than .05. Rejection of the hypothesis indicates that the model does *not* fit well. Our a priori decision rules were, to indicate a good fit, the RMSEA test should not be rejected, the RMR should be equal to or less than .05, and the CFI and IFI should be equal to or greater than .90.

Next, LISREL was used to test the hypotheses. To account for measurement error, multiple indicators were created for each latent variable. For attitudinal trust, subjective norms, and intentions items were randomly assigned to two subscales, with the constraint that the subscales for a given variable have the same number of items (or, for scales with an odd-number of items, so that the subscales differed by only one item). To test the mediation hypothesis (Hypothesis 4), we followed the guidelines of Kenny, Kashy, and Bolger (1998). Consistent with Baron and Kenny (1986), these authors emphasize that mediation requires that one variable (X) affects the mediator (Y) and that the mediator, in turn, affects a given outcome variable (Z). However, Kenny et al. also explain that it is not necessary that the first variable (X) be correlated with the outcome variable (Z) (1998: 260). This is consistent with the conceptualization of others who define mediation as the condition whereby a certain variable (mediator) is caused by another variable and, in turn, causes a third variable (Schmitt & Klimoski, 1991: 87); the first variable may or may not be correlated with the third and, either way, such correlation is neither necessary nor sufficient to prove a case of mediation. Therefore, if

our data support the model shown in Figure 2, including the links from attitudinal trust and subjective norms to intentions, and from intentions to behavior, we will take this as evidence in support of the mediating role of intent to cooperate.

Results

Table 1 reports the summary statistics for all variables.

Table 1
Descriptive Statistics and Correlations

Variable	Means	s.d.	1	2	3	4
1. Attitudinal trust	2.76	.74	(.89)			
2. Subjective cooperative norms	2.42	.65	.26	(.66)		
3. Cooperative intentions	2.16	.61	.45	.39	(.82)	
4. Cooperative behavior	1.97	.65	.19	.02	.30	(.85)

n = 176. For correlations with absolute values greater than .18, $p < .05$. For correlations with absolute values greater than .20, $p < .01$. Attitudinal trust is measured at time 1. Numbers in parentheses are Cronbach's alpha coefficients.

Discriminant Validity of the Measures

Regarding the discriminant validity of the measures, Table 2 reports the fit values for the seven measurement models. As can be seen, only the four-factor model and the three-factor model combining subjective norms and intentions provide a reasonably good fit. Although both of these models have RMRs slightly higher than .05, the RMSEA tests of close fit are not rejected and the CFI and IFI values are high. However, the four-factor model fits the data significantly better than does the model combining norms and intentions, $\chi^2_{diff} [3 df] = 37.22, p < .001$. The other five models fail the RMSEA test of close fit, have RMRs greater than .05, and have CFIs and IFIs less than .90. In analyses not reported here, we found that the four-factor model fit the data better than did any of these models. These results support the discriminant validity of attitudinal trust, subjective norms, cooperative intentions, and cooperative behavior.

Table 2
Results of Confirmatory Factor Analyses

Model	χ^2	df	RMSEA	RMR	CFI	IFI
Four-factor	601.78	422	.048	.070	.91	.91
Three-factor, norms = intentions	639.09	425	.054	.073	.89	.89
Three-factor, trust = norms	678.00	425	.059*	.081	.87	.88
Three-factor, norms = behavior	703.63	425	.062**	.098	.86	.86
Three-factor, trust = intentions	840.56	425	.092**	.095	.79	.80
Three-factor, intentions = behavior	902.72	425	.100**	.110	.76	.77
Three-factor, trust = behavior	1001.66	425	.110**	.120	.71	.72

n = 176. RMSEA = root-mean-square error of approximation, RMR = root-mean-square residual, CFI = comparative fit index, IFI = incremental fit index.

* RMSEA test of close fit rejected, $p < .05$.

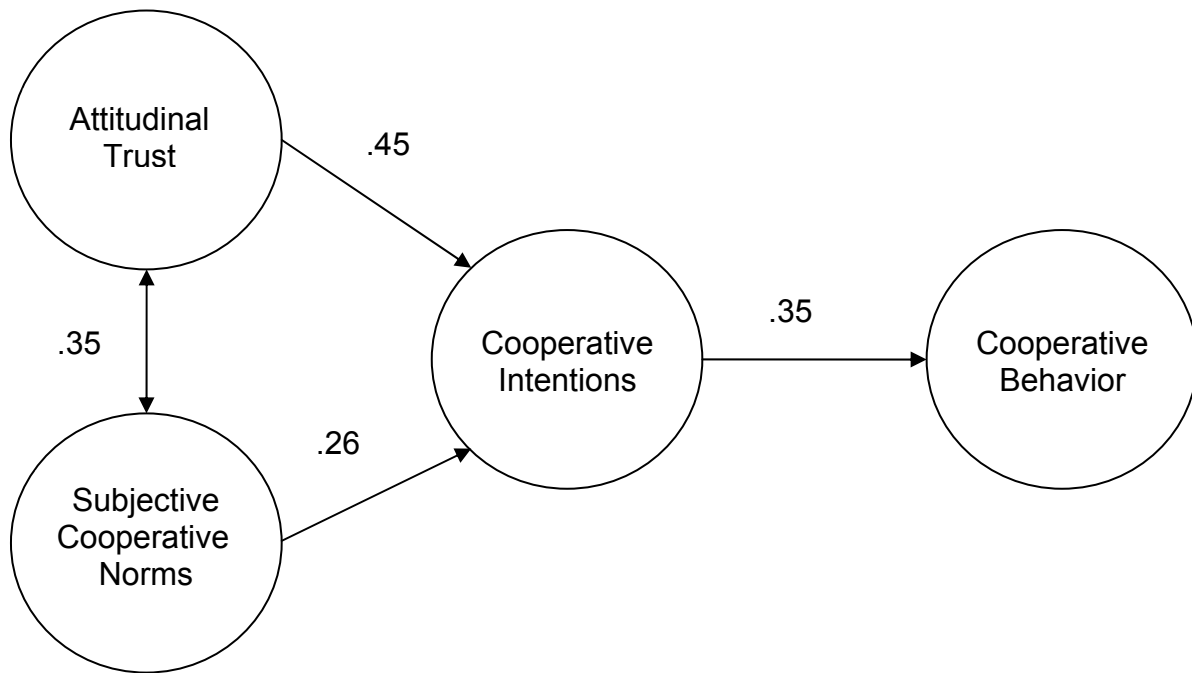
** RMSEA test of close fit rejected, $p < .01$.

Test of the Model and Hypotheses

Regarding our structural model, the test of close fit of the model to the data was not rejected, RMSEA = .059, $p = .33$. This indicates that the model fits the data very well (Browne & Cudeck, 1993). The other indices also reveal a very good fit: RMR = .048, CFI = .98, IFI = .98. The model explains 36% of the variance in cooperative intentions and 12% of the variance in cooperative behavior. The strong fit of the model and sizeable path coefficients (shown in Figure 2) support our hypotheses.

The t-values for the relevant paths were 4.46 for attitudinal trust → intentions, 2.02 for subjective cooperative norms → intentions, and 3.67 for cooperative intentions → cooperative behavior. Given that t-values greater than 2.0 suggest retaining a path in a model (Jöreskog & Sörbom, 2001), these results further support Hypotheses 1 through 3. To more rigorously test the mediating role of intentions (Hypothesis 4), three additional models were examined: one freeing the path from attitudinal trust to

Figure 2



Latent-Variable Structural Model and Results

The structural path estimates are standardized and all path coefficients are significant a $p < .05$. To simplify the presentation, the measurement model is omitted and the disturbance error effects are not shown.

cooperation, one freeing the path from subjective norms to cooperation, and one freeing paths from both trust and subjective norms to cooperation. None of these models fit the data better than did the original model. For the attitudinal trust \rightarrow behavior model, $\chi^2_{diff} [1 df] = 0.28, n.s.$; for the subjective norm \rightarrow behavior model, $\chi^2_{diff} [1 df] = 3.30, n.s.$; for the model freeing both paths, $\chi^2_{diff} [2 df] = 3.82, n.s.$ Thus, all of the hypotheses received strong support and, overall, the original model fit as well or better than less parsimonious models.

In ancillary analyses not reported in full here, we used hierarchical regression to examine whether attitudinal trust and subjective norms interacted in affecting cooperative intentions. No evidence for such an interaction was found. Therefore, it does not appear that subjective norms moderate the effect of trust on intentions (or vice-versa).

Discussion

The three goals of this study were to clarify and validate the distinction between trust and cooperation, to include a social context variable in the model and to develop and to test a simplified model of trust and cooperation. First, our theory and results clarify and validate the distinction between trust and cooperation. Trust in a specific other is an attitude that includes positive expectations regarding the other's conduct, including the expectation that the other will cooperate. Cooperation is a set of behaviors such as sharing information, communicating openly, and seeking mutually satisfactory solutions to problems. Thus, a key distinction between trust and cooperation is that trust in a specific other is attitudinal whereas cooperation with the other is behavioral. In support of Hypothesis 1, higher levels of attitudinal trust generally lead to a greater intent to cooperate. However, the findings also show that high trust is not the sole influence on such an intention and that the effect of trust on cooperation is indirect.

Second, our model includes the role of social factors. Per Hypothesis 2, subjective cooperative norms also affect the intent to cooperate and, therefore, can add to or subtract from the effect of trust on cooperation. Consistent with extant theory (De Cremer & Dewitte, 2002, Williams, 2001) this supports inclusion of subjective cooperative norms in models of trust and cooperation because attitudinal trust in combination with subjective norms against cooperation will result in lower intent to cooperate. Conversely, the intent to cooperate can exist in the face of low attitudinal trust if subjective norms favor cooperation. Further, the concept of subjective norms explains why some people may choose to cooperate in excess of the objective cooperation norm: people can perceive norms differently, and not everyone is equally motivated to comply with norms (Currall, 1992).

Third, we have developed and tested a simplified model of the process by which trust effects cooperation. It is not our intent to diminish the value of the work of earlier researchers and theorists (Mayer, et al, 1995; Jones & George, 1998; Ross & LaCroix, 1996; Williams, 2001). Rather we have endeavored to consolidate their insights and contributions into a more compact model that is amenable to further research and exploration of the dynamics of trust and cooperation in empirical studies. The model has demonstrated predictive utility and has demonstrated the links between cooperation and both trust and a contextual variable (subjective norms). Further, it has shown that behavioral intent fully mediates the relationship between trust and subjective norms and cooperation addressing a significant omission in the earlier theories of trust and cooperation.

Finally, the measure we used for cooperation was one negotiator's perception of the other negotiator's cooperation. Perceptions of another's behavior as it relates to trust development and cooperation have been discussed by multiple researchers and theorists (Andersenn, 2005; Coletti, et al., 2005; Costa, 2003; Dyer & Chu, 2003; Huff, et al., 2002; Morrow, et al., 2004; Ross & La Croix, 1996; Williams, 2007). Yet few have used such perceptions as a dependent variable. An exception is Coletti, et al. (2005) who used a non-participating observer's perceptions of participants' behavior. Our

study used the participant's observations of the other's behavior, perceived cooperative behavior, in the context of the exercise as a dependent variable. The significant and large effect of this measure demonstrates that one's perception of the other's behavior is important to understanding cooperation and should be included in future models and empirical studies. The importance of this is reinforced in recent theory regarding the central role of threat regulation (actively managing one's behavior to create positive perceptions of one's behavior and intentions) to the development and maintenance of cooperation (Williams, 2007).

By developing and testing a simplified process model of the trust – cooperation relationship we hope to have given future theorists and researchers an empirically sound platform useful for investigation of trust-related phenomena. For example, per Hypotheses 3 and 4, trust and subjective cooperative norms affect the intent to cooperate which, in turn, affects cooperative behavior. Later work could expand on these findings by further exploring antecedents of attitudinal trust and subjective norms, searching for possible moderators of the trust – intention link, and determining why cooperative intentions do not always lead to cooperative behavior. Potentially fruitful lines of later research also include studying the link between objective cooperative norms (those that actually exist within the work environment) and subjective ones, and further identifying the variables affecting the accuracy of perceived cooperative norms. Other avenues for future research may include examining the influence of culture on the creation of cooperative norms, and examining the effects of technology on trust and cooperation. For example, regarding technology, this study could be replicated and extended by including communication mediums varying in richness (e.g., face to face, live audio/video, web chat, instant messaging, e-mail). This may be particularly fruitful if the study was extended to cross cultural studies of negotiation given the prevalence of web-based businesses and the rise of virtual organizations.

Our results have at least two implications for management. First, managers wishing to encourage cooperative behavior should promote cooperation as an organizational norm. Such a norm could be established by precedent (e.g., through modeling in early managerial – employee exchanges), explicit statements, or critical historical events (e.g., not promoting someone who is interpersonally incompetent) (Feldman, 1984). Although not all employees may perceive or be motivated to comply with a norm for cooperation, developing and reinforcing the norm would increase the probability that more employees internalize it in the form of subjective norms. Second, integrity and trust theorists have argued that honesty, fairness, and other aspects of integrity should lead to greater levels of trust (Becker, 1998; Hosmer, 1995; Mayer et al., 1995). Further, based on our findings and those of others who have found that trust develops or fails to develop rather quickly (Berg, Dickhaut, & McCabe, 1995; Butler, 1995; Jeffries, 2002; Kramer, 1994), we recommend that managers who want to foster trust and cooperation should act with integrity (Clark & Payne, 2006) and strongly encourage others to do the same. If managers wish to establish trusting relationships it is incumbent on them to make efforts to be trustworthy and trusting from the first interaction with the subordinate(s). Failure to do so may result in getting off on the wrong foot and initiating a less than trusting relationship that will be hard to turn into a

high trust relationship [see Mesquita (2007) for a discussion of rebuilding trust and its challenges]. The consequences of failure to establish trust early on will very likely be negative in terms of communication, cooperation, and motivation.

One limitation of the current study is that the subjective norms scale's reliability (.66) was a bit below the .70 rule-of-thumb (Nunnally, 1978). In our judgment, this value is not so far below the standard as to negate our findings. The results shown in Tables 1 and 2 and Figure 2 demonstrate that the measure is valid enough to predict and explain cooperative intentions. That is, the measure is significantly correlated with intent to cooperate, explains unique variance in these intentions even after controlling for trust, and is empirically distinguishable from all the other measures included in the four-factor model. Thus, while a more reliable measure would certainly have been desirable, the weight of the evidence is that it was psychometrically sound enough for our purposes.

Other limitations include use of college students as participants (which could constrain generalizability to other groups), use of a lab setting (which could limit generalizability to work settings), and non-experimental procedures (which could limit inferences of causality). Also, we did not strictly apply the principal of compatibility in conceptualizing attitudinal trust and developing measures. Finally, if researchers desire to use Kelly's (1966) negotiation exercise in future research it would be good to update the products being negotiated for to current versions. For example typewriters could be replaced with laptop computers. While the use of typewriters as an item in the role play exercise did not adversely impact this study it did raise concerns on the part of one anonymous reviewer and it is an easy issue to resolve.

On the positive side: (1) the bulk of participants were upper-level students (56% of whom were employed at the time of the study), (2) the task involved in the lab setting (buying and selling commodities) was selected because of its relevance to real-world work contexts, and (3) allowing trust and its consequences to unfold naturally (i.e., rather than trying to manipulate these variables experimentally) increases the pertinence and generalizability of this study's results. Regarding the principle of compatibility, our results demonstrate that if our approach reduced the predictability of behavior, it did not do so to such an extent as to negate the significant effects among trust, cooperative intentions, and cooperative behavior. Nevertheless, future research should replicate and extend this study to other groups of people and other settings, should include research designs more amenable to examining directionality, and should refine measures to achieve greater attitudinal relevance.

References

- Ajzen, I. (1989). Attitude structure and behavior. In A. Pratkanis, S. Breckler, & A. Greenwald (Eds.), *Attitude structure and function* (pp.241-274). Hillsdale, NJ: Erlbaum.
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Ajzen, I. & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes,

- intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22, 453-474.
- Andersenn, J. A. (2005) Trust in managers: a study of why Swedish subordinates trust their managers. *Business Ethics: A European Review*, 14(4), 392-404.
- Arrow, K. (1974). *The limits of organization*. New York: Norton.
- Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.
- Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Barnard, C. (1938). *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Becker, T. E. (1998). Integrity in organizations: Beyond honesty and conscientiousness. *Academy of Management Review*, 23, 154-161.
- Becker, T. E., Randall, D. M., & Riegel, C. D. (1995). The multidimensional view of commitment and the theory of reasoned action: A comparative evaluation. *Journal of Management*, 21, 617-638.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107, 238-246.
- Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust reciprocity, and social history, Unpublished working paper, University of Minnesota, Minneapolis.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods and Research*, 17, 303-316.
- Browne, M. W. & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods and Research*, 21, 230-258.
- Browne, M. W. & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen and J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Beverly Hills, CA: Sage.
- Buchan, H. F. (2005). Ethical decision making in the public accounting profession: An extension of Ajzen's theory of planned behavior. *Journal of Business Ethics*, 61(2), 165-181.
- Budd, R. J. (1986). Predicting cigarette use: The need to incorporate measures of salience in the theory of reasoned action. *Journal of Applied Social Psychology*, 16, 663-685.
- Butler, J. K. (1995). Behaviors, trust, and goal achievement in a win-win negotiating role-play. *Group and Organization Management*, 20, 486-502.
- Butler, J. K. (1999). Trust expectations, information sharing, climate of trust, and negotiation effectiveness and efficiency. *Group and Organization Management*, 24, 27-238.
- Chiles, T. H. & McMackin, J.F. (1996). Integrating variable risk preferences, trust, and transaction cost economics. *Academy of Management Review*, 21, 73-99.
- Chowdhury, S. (2005). The role of affect- and cognition-based trust in complex knowledge sharing, *Journal of Managerial Issues*, 22(3), 310-326.
- Clark, M. & Payne, R. (2006). Character-based determinants of trust in leaders. *Risk Analysis*, 26, 1161-1173.

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Coleman, J. S. (1990). *Foundations of social theory*. Cambridge, MA: Harvard University Press.
- Coletti, A. L., Sedatole, K.L., & Towry, K.L. (2005). The effect of control systems on trust and cooperation in collaborative environments. *The Accounting Review*, *80*, 477–500.
- Cook, K. S., Hardin, R., & Levi, M. (2005). *Cooperation without trust?* New York: Russell Sage Foundation.
- Costa, A. C. (2003). Work team trust and effectiveness, *Personnel Review*, *32*, 605–622.
- Currall, S. C. (1992). Group representatives in educational institutions: An empirical study of superintendents and teacher union presidents. *Journal of Applied Behavioral Science*, *28*, 296–317.
- Currall, S. C. & Judge, T. A. (1995). Measuring trust between organizational boundary role persons. *Organizational Behavior and Human Decision Processes*, *64*, 151–170.
- De Cremer, D. & Dewitte, S. (2002). Effect of trust and accountability in mixed-motive situations. *The Journal of Social Psychology*, *142*, 541–543.
- De Dreu, C. K. W., Giebels, E., & Van de Vliert, E. (1998). Social motives and trust in integrative negotiation: The disruptive effects of punitive capability. *Journal of Applied Psychology*, *83*, 408–422.
- Deutsch, M. (1962). Cooperation and trust: Some theoretical notes. In M. Jones (Ed.), *Nebraska Symposium on Motivation* (275–320). Lincoln: University of Nebraska.
- Deutsch, M. (1973). *The resolution of conflict: Constructive and destructive processes*. New Haven: Yale University Press.
- Dodge, T. & Jaccard, J. J., (2007). Negative beliefs as a moderator of the intention–behavior relationship: Decisions to use performance-enhancing substances. *Journal of Applied Social Psychology*, *37*, 43–59.
- Doney, P. M., Cannon, J. P., & Mullen, M. R. (1998). Understanding the influence of national culture on the development of trust. *Academy of Management Review*, *23*, 601–620.
- Dyer, J. H. & Chu, W. (2003). The role of trustworthiness in reducing transaction costs and improving performance: Empirical evidence from the United States, Japan, and Korea. *Organization Science*, *14*, 57–68.
- Fang, C., Kimbrough, S., Vzluri, A. & Zheng, Z. (2002). On the adaptive emergence of trust behavior in a game of stag hunt. *Group Decision and Negotiation*, *11*(6), 449–467.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Fishbein, M. & Stasson, M. (1990). The role of desires, self-predictions, and perceived control in the prediction of training session attendance. *Journal of Applied Social Psychology*, *20*, 173–198.
- Gill, H., Boies, K., Finegan, J. E., & McNally, J. (2005). Antecedents of trust: Establishing a boundary condition for the relation between propensity to trust and intention to trust. *Journal of Business and Psychology*, *19*(3), 287–302.

- Guth, W., Schmittberger, R., & Schwarze, B. (1982). An experimental analysis of ultimatum bargaining. *Journal of Economic Behavior and Organization*, 3, 367-388.
- Guzzo, R. A. & Shea, G. P. (1992). Group performance and intergroup relations in organizations. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology*, (pp. 269-313). Palo Alto, CA: Consulting Psychologists Press.
- Highhouse, S., Lievens, F., & Sinar, E. F. (2003). Measuring attraction to organizations. *Educational & Psychological Measurement*, 63, 986-1001.
- Ho, T. & Weingelt, K. (2005). Trust building among strangers. *Management Science*, 51, 519-530.
- Hosmer, L. T. (1995). Trust: The connecting link between organizational theory and philosophical ethics. *Academy of Management Review*, 20, 379-403.
- Huff, L. C, Cooper, J., & Jones, W. (2002). The development and consequences of trust in student project groups. *Journal of Marketing Education*, 24, 24-34.
- Hwang, P. & Burgers, W. P. (1997). Properties of trust: An analytical view. *Organizational Behavior and Human Decision Processes*, 69, 67-73.
- Jeffries, F. (2002). Subjective norms, dispositional trust, and initial trust development. *Journal of Behavioral and Applied Management*, 3(2), 129-139.
- Jones, T. M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. *Academy of Management Review*, 20, 404-437.
- Jones, G. R. & George, J. M. (1998). The experience and evolution of trust: Implications for cooperation and teamwork. *Academy of Management Review*, 23, 531-546.
- Jöreskog, K. & Sörbom, D. (2001). *LISREL 8: User's Reference Guide*, 2nd ed. Scientific Software International, Inc., Chicago, IL.
- Kelley, H. H. (1966). A classroom study of the dilemmas in interpersonal negotiations. In K. Archibald (Ed.), *Strategic interaction and conflict*, (pp.49-73). Berkley, CA: University of California, Institute of International Studies.
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 233-265). New York: McGraw-Hill.
- Kim, M. & Hunter, J. E. (1993). Attitude-behavior relations: A meta-analysis of attitudinal relevance and topic. *Journal of Communication*, 43, 101-142.
- Kramer, R. M. (1994). The sinister attribution error: Paranoid cognition and collective distrust in organizations. *Motivation and Emotion*, 18, 199-230.
- Kramer, R. M. & Tyler, T. R. (1996). *Trust in organizations: Frontiers of theory and research*. Thousand Oaks, CA: Sage.
- Kraus, S. J. (1997). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and Social Psychology Bulletin*, 21, 58-75.
- Kumar, N., Scheer, L. K., & Steenkamp, J. (1995). The effects of perceived interdependence on dealer attitudes. *Journal of Marketing Research*, 32, 348-366.
- Lämsä, A. & Pučėtaitė, R. (2006). Development of organizational trust among employees from a contextual perspective. *Business Ethics: A European Review*, 15(2), 130-141.
- Larzelere, R. E. & Huston, T. L. (1980). The dyadic trust scale: Toward understanding interpersonal trust in close relationships. *Journal of Marriage and the Family*, 42,

595-604.

- Lewicki, R. J., McAllister, D. J., & Bies, R. J. (1998). Trust and distrust: New relationships and realities. *Academy of Management Review*, 23, 438-458.
- Macy, M. & Skvoretz, J. (1998). The evolution of trust and cooperation between strangers: A computational model. *American Sociological Review*, 63, 638-660.
- Malhotra, D. & Murnighan, J. K. (2002) The Effects of Contracts on Interpersonal Trust. *Administrative Science Quarterly*, 47, 534-559.
- Martin, M. M., Anderson, C. M., Burant, P. A., & Weber, K. (1997). Verbal aggression in sibling relationships. *Communication Quarterly*, 45, 304-317.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20, 709-734.
- McAllister, D. J. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38, 24-59.
- McGuire, W. J. (1985). Attitudes and attitude change. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (pp. 233 – 346). NY: Oxford University Press.
- McKnight, D. H., Cummings, L. L., & Chervany, N. L. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review*, 23, 473-490.
- Mesquita, L. F. (2007). Starting over when the bickering never ends: Rebuilding aggregate trust among clustered firms through trust facilitators *Academy of Management Review*, 32, 72-91.
- Miller, G. J. (1992). *Managerial dilemmas: The political economy of hierarchy*. Cambridge, MA: Cambridge University Press.
- Mishra, A.K. (1996). Organizational responses to crisis: The centrality of trust. In R.M. Kramer and T.R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp.261-287). Thousand Oaks, CA: Sage.
- Mishra, A. K. & Spreitzer, G. M. (1998). Explaining how survivors respond to downsizing: The roles of trust, empowerment, justice, and work redesign. *Academy of Management Review*, 23, 567-588.
- Morgan, R. M. & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58, 20-38.
- Möllering, G., Bachmann, R., & Lee, S. (2004). Understanding organizational trust – foundations, constellations, and issues of operationalization. *Journal of Managerial Psychology*, 19, 556-622.
- Morrow, J. L., Hansen, M. H., & Pearson, A. W. (2004). The cognitive and affective antecedents of general trust within cooperative organizations. *Journal of Managerial Issues*, 14, 48-64.
- Neale, M. A. & Bazerman, M. H. (1991). *Cognition and rationality in negotiation*. New York: Free Press.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- O'Reilly, C. A., III., & Roberts, K. H. (1974). Information filtration in organizations: Three experiments. *Organizational Behavior and Human Performance*, 11, 253-265.
- Prestholdt, P. H., Lane, I. M., & Mathews, R. C. (1987). Nurse turnover as reasoned action: Development of a process model. *Journal of Applied Psychology*, 72, 221-227.

- Read, W. H. (1962). Upward communication in industrial hierarchies. *Human Relations*, 15, 3-15.
- Robinson, S. L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly*, 41, 574-599.
- Ross, W. & LaCroix, J. (1996). Multiple meanings of trust in negotiation theory and research: A literature review and integrative model. *International Journal of Conflict Management*, 7, 314-360.
- Schreurs, B., Derous, E., De Witte, K., Proost, K., Andriessen, M., & Glabeke, K. (2005). Attracting potential applicants to the military: The effects of initial face-to-face contacts. *Human Performance*, 18, 105-122.
- Schmitt, N. W. & Klimoski, R. J. (1991). *Research methods in human resources management*. Cincinnati, OH: South-Western.
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, 15, 325-343.
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, 25, 173-180.
- Thomas, K. W. (1992). Conflict and negotiation processes in organizations. In M. D. Dunnette and L. M. Hough (Eds.), *Handbook of industrial & organizational psychology* (pp. 651-717). Palo Alto, CA: Consulting Psychologist.
- Webb, E. J. (1996). Trust and crisis. In R. M. Kramer and T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp.288-301). Thousand Oaks, CA: Sage.
- Whitener, E. M., Brodt, S. E., Korsgaard, M. A., & Werner, J. M. (1998). Managers as initiators of trust: An exchange relationship framework for understanding managerial trustworthy behavior. *Academy of Management Review*, 23, 513-530.
- Williams, G. R. (1993). Style and effectiveness in negotiation. In L. Hall (Ed.), *Negotiation strategies for mutual gain*. Newbury Park, CA: Sage.
- Williams, M. (2001). In whom we trust: Group membership as an affective context for trust development, *Academy of Management Review*, 26, 377-396.
- Williams, M. (2007). Building genuine trust through Interpersonal emotion management: A threat regulation model of trust and collaboration across boundaries *Academy of Management Review*, 32, 595-621.
- Woolley, D. J. & Eining, M. M. (2006). Software piracy among accounting students: A longitudinal comparison of changes and sensitivity. *Journal of Information Systems*, 20, 49-63.
- Zak, A. M., Gold, J. A., Ryckman, R. M., & Lenney, E. (1998). Assessment of trust in intimate relationships and the self-perception process. *The Journal of Social Psychology*, 138, 217-228.
- Zand, D. E. (1972). Trust and managerial problem solving. *Administrative Science Quarterly*, 17, 229-239.