Can I Trust You to Trust Me?
A Theory of Trust, Monitoring, and Cooperation in Interpersonal and Intergroup Relationships

Donald L. Ferrin
Singapore Management University
Lee Kong Chian School of Business
50 Stamford Road
Singapore 178899
Tel: (65) 6828-0751
Fax: (65) 6828-0777
dferrin@smu.edu.sg

Michelle C. Bligh
Claremont Graduate University
School of Behavioral and Organizational Sciences
123 E. Eighth Street
Claremont, CA, USA 91711
Tel: 909-607-3715   Fax: 909-621-8905
Michelle.Bligh@cgu.edu

Jeffrey C. Kohles
College of Business Administration
California State University San Marcos
San Marcos, CA, USA 92096-0001
Tel: 760-750-4237   Fax: 760-750-4250
jkohles@csusm.edu

Acknowledgement: This study was supported in part by a research grant from the School of Management of the State University of New York at Buffalo.
Abstract

Drawing on the diverse literatures of game theory, negotiation, interpersonal trust, and interorganizational relationships, we develop a theoretical model of the relationships among trust, monitoring, and cooperation in interpersonal and intergroup interactions. We use the concept of isomorphism as a basis for developing this theory, observing that while the constructs may differ in structure across levels, they may still have similar functions. We also argue that a more explicit distinction between own and other’s trust, own and other’s monitoring, and own and other’s cooperation is critical for better understanding the relationships among trust, monitoring, and cooperation. By making this distinction between own and other, and by drawing on four distinct literatures, we are able to provide greater precision in how trust, monitoring, and cooperation are defined, and a more comprehensive and variegated view of the relationships among the constructs through the development of specific research propositions. We conclude with a discussion of the potential contributions of the model for research and practice, and an agenda for future research.
Can I Trust You to Trust Me? A Theory of Trust, Monitoring, and Cooperation in Interpersonal and Intergroup Relationships

Researchers have had a long-standing interest in interpersonal and intergroup cooperative behavior, in the ability of constructs such as trust and monitoring to influence cooperative behavior, and in other relationships that might exist among these three constructs. Cooperation is crucial for the survival of organizations (Barnard, 1938), and trust and monitoring are frequently recognized as important precursors of cooperation. Trust has been cited as the variable that has perhaps the strongest influence on interpersonal and group behavior (e.g., Golembiewski & McConkie, 1975). And monitoring is a core managerial activity for procuring cooperative behavior (e.g., Mintzberg, 1973). Indeed, the three constructs are of central importance in many interpersonal and intergroup work activities, including leader-subordinate relationships, management-worker relations, and the interpersonal and intergroup negotiations that facilitate internal resource allocations, coordination of production activities, and numerous other activities. Given their importance, it is not surprising that the three constructs feature prominently in literatures such as game theory, negotiation, interpersonal trust, and interorganizational relationships.

While it might be reasonable to assume that the relationships among the three constructs are fairly straightforward, a more penetrating analysis reveals that a surprisingly large number of propositions can be developed to describe the relationships among the variables, and some of these seem to be inconsistent with one another. For example, researchers have frequently proposed that trust and monitoring lead to increased cooperation (e.g., see Dirks & Ferrin, 2001; McAllister, 1995; Perlow, 1998). Yet researchers have also noted that: (i) trust may be a consequence rather than a determinant of cooperation (Dirks & Ferrin, 2002; Ross & LaCroix,
1996); (ii) monitoring may reduce cooperation (Kramer, 1999); (iii) trust and monitoring may be alternative determinants of cooperation (McAllister, 1995) which suggests that they interact as determinants of cooperation; (iv) trust may create the very conditions under which malfeasance (i.e., reduced cooperation) becomes possible (Granovetter, 1985); and (v) monitoring reduces trust (Strickland, 1958), which (vi) may then reduce cooperation (Ghoshal & Moran, 1996). These inconsistencies reveal a lack of understanding about several aspects of the posited relationships: What is the nature of the relationships (e.g., direct or moderated)? What is the valence (i.e., positive or negative)? And what is the direction of causality?

Yet there is another critical cause of this lack of understanding that has escaped any systematic attention: Research has not adequately distinguished between one’s own and the other’s trust, monitoring, and cooperation. To provide an abstract example, party A may cooperate with party B because: (i) A trusts B (A has confidence that B has integrity and hence will behave cooperatively); (ii) B trusts A (A wishes to honor B’s trust by cooperating rather than competing); (iii) A is monitoring B (therefore A knows that B is behaving cooperatively); (iv) B is monitoring A (therefore A has little opportunity to benefit from competing); (v) A cooperated in the past (and A’s behavior has become habituated); and (vi) B cooperated in the past (and A is now reciprocating B’s behavior). In this example, A’s cooperation can be predicted by own and other’s trust, own and other’s monitoring, and own and other’s past cooperation.

The distinction between own and other provides an opportunity to develop a more comprehensive theoretical understanding of the relationships among the variables, and a more precise specification of interdependencies that exist in dyadic relationships. Yet it also adds complexity. First, it effectively doubles the number of variables from three to six, which greatly
increases the number of ways the variables may influence each other. Second, since own trust is usually correlated with other’s trust within a dyad (and similarly, own and other’s cooperation, and own and other’s monitoring, are also correlated within dyad), the explicit recognition of interdependency implies empirical designs that include nonindependent observations, and therefore violate regression and ANOVA assumptions (Kashy & Kenny, 2000). Thus, it will be important not only to formulate propositions that directly address issues of “own vs. other,” but also consider how future empirical research can be designed to operationalize and test such propositions without violating the relevant analytical assumptions.

Our objective of providing a fuller understanding of the relationships among trust, monitoring, and cooperation in intergroup as well as interpersonal relationships presents both an opportunity and a challenge. The opportunity should be obvious: As will be noted below, studies of the relationships among trust, monitoring, and cooperation have been conducted in four literatures: game theory, negotiation, interpersonal work relationships, and interorganizational relationships. However, studies in each literature have for the most part been conducted in isolation from studies in the other literatures. Consequently, there are considerable opportunities for cross-fertilization across areas. But we also recognize and will address one significant challenge in this undertaking: We must establish whether the definitions and research contexts of the constructs are sufficiently similar across the four literatures to justify cross-literature and cross-level theory development. For instance, interpersonal-level theories of trust, monitoring and cooperation are sometimes used to hypothesize intergroup effects, without adequate consideration of the ability of the theories to generalize across levels. We therefore explicitly recognize and address another important challenge in this undertaking; namely, that we must
consider whether the constructs have similar causal effects at different levels even if they have non-identical structures (Klein, Tosi, & Cannella, 1999).

In sum, we will present a detailed theoretical model of the relationships among trust, monitoring, and cooperation, that distinguishes between own and other’s trust, monitoring, and cooperation, and attempts to capture not only the nature of the relationships among the constructs (e.g., main vs. moderated effects), but also their valence (positive vs. negative effects), their potentially recursive nature, and their applicability at multiple levels (interpersonal vs. intergroup). We hope that the model will not only provide insight into the relationships among the constructs of interest, but also stimulate future research. Accordingly, we will conclude with an agenda for future research to be conducted to validate and extend the model, as well as the model’s implications for both research and practice.

Theoretical Foundations

We will begin by considering how the constructs have been researched in the four literatures, and the extent to which the constructs have similar definitions and research contexts across these literatures. Next, we will highlight several research issues and unanswered questions across these literatures. We will then set out our approach for theory development, followed by formal development of testable research propositions.

Key Concepts

Cooperation and the mixed-motive context of interpersonal and intergroup relationships. In interpersonal and intergroup relationships, parties often have motives both to cooperate and compete with each other, to maximize the collective interest yet also maximize their self-interest at the expense of the collective interest. Individuals and groups therefore experience benefits as well as risks from cooperating with one another. This is the essence of the mixed-motive social
dilemma (e.g., Dawes, 1980), and accordingly, the interdependence that exists in such settings is a boundary condition of our analysis.

Game theory researchers are interested in understanding factors that influence cooperation in social dilemmas. This has frequently been operationalized in the prisoner’s dilemma game, in which players’ moves are considered cooperative or competitive to the extent they advance collective rather than selfish interests (e.g., Deutsch, 1958). Similarly, negotiation is often defined as a form of joint decision-making in which two or more parties resolve their non-identical interests (e.g., Neale & Northcraft, 1991). In mixed-motive negotiation research, negotiators have simultaneous interests to compete and cooperate, and researchers often examine whether negotiators use cooperative versus competitive behaviors (e.g., sharing information truthfully vs. lying), and the extent to which a cooperative outcome is achieved (i.e., the extent to which the decision satisfies the collective interests of the negotiators).

Scholars in the interpersonal trust literature often hypothesize that in contexts such as interpersonal work relationships and negotiations, trust will lead to numerous cooperative behaviors and outcomes such as job performance, organizational citizenship behaviors, and cooperative agreements (Dirks & Ferrin, 2001, 2002). Such behaviors can be considered “cooperative” since they advance collective interests (those of the organization as a whole, subgroups within the organization, or work colleagues) rather than the selfish interests of the individual. Finally, the interorganizational relationships (“IOR”) literature examines relationships between or among firms such as joint venture or strategic alliance partners. In this literature, the level of the parties’ cooperation, defined as the extent to which a party will pursue mutually compatible interests rather than acting opportunistically, is a crucial dependent variable (e.g., Parkhe, 1993).
**Trust.** Trust is often defined as a belief or confidence that one party has concerning another party’s characteristics that may increase willingness to take risks and ultimately help “solve” the social dilemma. Interorganizational trust differs from interpersonal trust in terms of the referent (a *group* of individuals comprising the referent organization) and the origin (a *group* of individuals who may share an orientation toward the referent organization) (Zaheer, McEvily, & Perrone, 1998). Scholars in the negotiation (Ross & LaCroix, 1996), interpersonal trust (Mayer, Davis, & Schoorman, 1995) and IOR (Nootboom, Berger, & Noorderhaven, 1997) literatures have observed that trust (sometimes referred to as ‘perceived trustworthiness’) can be defined as a belief or confidence about another party’s integrity (including reliability, predictability, and dependability) and/or benevolence (including goodwill, motives, intentions and caring). Representative definitions in these three literatures that utilize one or more of these dimensions are provided by Dirks (2000), McAllister (1995), Kimmel, (1980) Schurr and Ozanne (1985), Ring and Van de Ven (1992), and Zaheer, McEvily and Perrone (1998), among others. Game theory researchers have used conceptual definitions of trust that are less specific but still consistent with those above (e.g., “trusting and friendly attitudes” (Deutsch, 1980)).

In defining trust as “an individual’s or group’s belief that another individual or group makes efforts to uphold commitments, is honest, and does not take advantage given the opportunity,” Cummings and Bromiley (1996) explicitly allowed that trust can be an interpersonal or intergroup belief. Their definition is also consistent with the integrity and benevolence dimensions cited above. Therefore we will adopt this as our conceptual definition of trust.

**Monitoring.** In this paper, we focus specifically on monitoring, a form of control that has been frequently examined across the four literatures. Monitoring is defined as behaviors
conducted by one party to gain information about another party’s level of cooperation. Monitoring is considered a critical element of formal control because it provides parties the possibility of determining whether there have been deviations from agreed-upon rules (Bijlsma-Frankema & Costa, 2005). Across the four research streams, such information is considered important for a variety of reasons. In particular, it provides information about a partner’s behavior that can foster cooperation, and it allows one to protect one’s interests by detecting competitive behavior. Game theory researchers argue that the ability to monitor a partner’s behavior is an important determinant of cooperation (Axelrod & Hamilton, 1981), and researchers have examined the effects of inaccurate information about a partner’s past behavior, and parties’ delays in reacting to such information, as determinants of cooperation (e.g., Kollock, 1993). Negotiators frequently engage in reciprocity, i.e., they use their knowledge of their partner’s past behavior to determine their own behavior (e.g., Lewicki, Saunders, & Barry, 2006: 223), which suggests that information obtained through monitoring is an important determinant of cooperation. The interpersonal trust literature has defined control-based monitoring as behavior that reduces the uncertainty inherent in a situation (McAllister, 1995). Finally, in interorganizational relationships it has been recognized that monitoring is used to gain information about another party’s level of cooperation, as well as to control the other party’s level of cooperation (Nooteboom, Berger, & Noorderhaven, 1997; Parkhe, 1993).

In sum, it appears that, at least at a conceptual level, there is considerable consistency in how trust, monitoring, and cooperation have been defined across the four literatures. Of course, we do not contend that these are the only definitions of trust, monitoring and cooperation that exist. In fact, there is a lack of consistency in how the three constructs are defined within each of the literatures. For example, in each of the four literatures trust has sometimes been
conceptualized or operationalized as a behavior; in the interpersonal trust literature trust is sometimes defined as an intention; and in three of the four literatures (all except IOR) trust is also examined as a personality variable. Similar variations exist for definitions of cooperation and monitoring. Scholars in each of the literatures have recognized these inconsistencies, and the inconsistencies remain an important focus of research. Resolving these inconsistencies is far beyond the scope of this paper. Instead, we simply contend that the three constructs, as defined in this paper, are a focus of research in all four literatures. This enables us to draw insights from various research streams, compare and contrast those insights, and develop conclusions that may contribute to multiple areas of research.

Research Issues and Unanswered Questions across the Four Literatures

Early game theory researchers (e.g., Deutsch, 1958) argued that trust was an important determinant of cooperation. However, rather than defining trust as a perceptual variable distinct from cooperation, this research operationalized trust as cooperation and then interpreted the emergence of cooperative behavior as a manifestation of trust (Bigley & Pearce, 1998; Kee & Knox, 1970). While researchers have observed that information about a partner’s behavior influences cooperation levels (e.g., Kollock, 1993), game theory studies typically treat information about past behavior as a constant or an experimental manipulation. Logical next steps in this literature will be to conceptualize and operationalize trust as a perceptual variable so that the relationships between trust and cooperation can be better assessed theoretically and empirically, and to consider monitoring as a potentially voluntary behavior so that researchers can examine the effects of monitoring on cooperation, and examine how monitoring might vary in response to factors such as trust and cooperation.

Different theorists have adopted different positions and perspectives on the role of trust in negotiation: While trust is often considered a precondition or determinant of cooperation, it is
sometimes considered a consequence, and sometimes it is actually equated with joint gain (Ross & LaCroix, 1996), suggesting that research is needed to better understand the relationship between the two variables. Regarding the last point, Ross and LaCroix specifically note that research is needed to understand how well measures of “trust-as-cooperation” correspond to perceptual measures of trust. As in game theory research, negotiation studies typically do not vary negotiators’ ability to obtain such information through monitoring. Finally, research on the relationship between trust and cooperation in intergroup negotiations is nearly nonexistent (see Polzer, 1996 for a notable exception).

Within the interpersonal trust literature, there is equivocal evidence for the proposition that interpersonal trust produces cooperative behaviors and outcomes such as citizenship behaviors, performance, information-sharing and cooperative negotiation behaviors and outcomes (Dirks & Ferrin, 2001). Researchers also note that trust may be a consequence of cooperation rather than an antecedent, yet it is difficult to draw firm conclusions about the direction of causality because most studies use cross-sectional field data (Dirks & Ferrin, 2002). And, as will be discussed below, monitoring is considered a potentially important variable in this literature, yet there is disagreement about whether it increases or decreases cooperation, and uncertainty about how it may interact with trust.

In interorganizational relationships, trust and monitoring are potentially important determinants of cooperation (e.g., Nooteboom, Berger, & Noorderhaven, 1997; e.g., Parkhe, 1993), yet the interrelationships among trust, monitoring and cooperation are not yet established. Parkhe (1993) recognized that trust may be an outcome as well as a determinant of cooperation, and called for more research to examine the direction of causality. As in the interpersonal trust literature, there are unresolved arguments about how trust and monitoring might combine to
influence cooperation (Bijlsma-Frankema & Costa, 2005; Das & Teng, 1998). There are also unresolved levels issues: Researchers sometimes use interpersonal-level theories, and tests of those theories typically operationalize trust as an individual informant’s report rather than a group-level construct.

Finally, we have thus far treated the four research areas as distinct. It is important to note that the literatures have substantial overlap. For instance, game theory provides a theoretical foundation for the other three areas. (Reviews of game theory are found within the negotiation (Bazerman, Curhan, Moore, & Valley, 2000), interpersonal trust (Bigley & Pearce, 1998) and IOR (Parkhe, 1993) literatures). Negotiation researchers often draw on the interpersonal trust literature (Ross & LaCroix, 1996), and interpersonal and intergroup trust are sometimes studied in the negotiation context (Dirks & Ferrin, 2001; Polzer, 1996). And researchers recognize that developmental processes of interorganizational relationships include negotiation, assessments of the other party’s level of cooperation, and the development of interpersonal and intergroup trust (Ring & Van de Ven, 1992). It is also notable that, at an abstract level, the research contexts are very similar across the four areas: they comprise dyadic (interpersonal or intergroup) relationships in which parties are simultaneously motivated to cooperate and compete in a situation of uncertainty and risk. In this situation, they often have an opportunity to monitor each other’s behavior; monitoring and past behavior provide a basis for forming and updating one’s trust in the other; and one’s trust in the other may influence future monitoring and cooperation within the relationship.

In sum, the literatures focus on common phenomena – trust, monitoring and cooperation – in research contexts that are highly similar. Yet each literature has its own preferred analytical approach (i.e., the laboratory experiment in game theory and negotiation; the cross-sectional
field study in interpersonal trust and interorganizational relationships), favored level of analysis, and unresolved questions. What is needed is a more comprehensive theoretical model that can integrate findings from the different research areas to provide a more holistic view of the relationships among trust, monitoring, and cooperation.

The Structure and Functions of Trust, Monitoring, and Cooperation in Interpersonal and Intergroup Relationships

The above discussion suggests that trust, monitoring and cooperation may have similar causal effects at the interpersonal and intergroup levels despite the fact that the three constructs represent collective phenomena at the intergroup level versus individual phenomena at the interpersonal level. This suggests that the constructs may be isomorphic; that is, they may have different structures, yet similar functions (causal outputs), across levels (Klein, Tosi, & Cannella, 1999). This distinction between the structure and function of a construct provides a useful tool for developing theory at multiple levels. The structure of a collective construct differs from an individual construct in that a collective construct can be understood as a series of events and interactions among constituent elements (e.g., individuals) that enable collective phenomena (e.g., group trust) to emerge. Importantly, constructs do not need to have identical structures in order to have similar functions (Morgeson & Hofmann, 1999). According to Morgeson and Hofmann, there are several advantages to focusing on functions rather than structure in the early stages of multilevel theory development: the approach enables one to better understand the nature of complex collective phenomena, but in a language that is readily understandable; an understanding of a construct’s function can provide insight into the construct’s structure; and importantly for our analysis, an understanding of function may allow one to integrate across levels of analysis.
Accordingly, in our theory development we will focus on the functions of the constructs rather than their structure. As we develop the propositions below, the similarity in functions across levels will often be self-evident because the logic supporting the proposition can readily apply at both the interpersonal and intergroup level, and/or because the proposition has been previously posited at both levels. Therefore we will consider functional similarity on an “exception” basis: In our proposition development we will specifically highlight those propositions for which logic or past research suggests a lack of functional similarity across levels.

In the interest of tractability, in our theorizing we assume that the parties to the relationship are relatively equivalent in power, status, and resources. Obviously, this will not always be the case. Therefore, in the Discussion we will consider how differences in power and resources might impact our predictions.

In the following sections, we first consider the determinants of cooperation, then the determinants of trust, and finally the determinants of monitoring. These three sets of propositions are summarized in Figure 1.

---

Insert Figure 1 about here.

---

Determinants of Cooperation

Trust. In mixed-motive situations, cooperation is inherently risky because one’s partner has the motivation, and often the opportunity, to exploit the cooperative behavior. Trust is argued to facilitate cooperation because a party who believes the partner is trustworthy will develop a higher willingness to risk, and therefore in conditions of risk is more likely to engage
in risk-taking behavior (e.g., Mayer, Davis, & Schoorman, 1995). One common rationale for this effect is that trust increases one’s confidence that the other will act cooperatively rather than opportunistically, which then increases one’s own willingness to cooperate (Das & Teng, 1998, 2001).

There is substantial support for this idea. As noted above, early game theory researchers hypothesized but did not actually examine the effect of trust on cooperation because trust was assumed to be a manifestation of cooperation. Negotiation researchers have found that trust leads to more cooperative negotiation behaviors and more integrative negotiation outcomes in interpersonal and intergroup negotiations (Lewicki, Saunders, & Barry, 2006; Ross & LaCroix, 1996; Taylor, 1989). Dirks and Ferrin (2001) present evidence that cooperative behavioral outcomes such as organizational citizenship behaviors are positively related to interpersonal trust, although they note that the effects are relatively mixed and weak. And, Parkhe (1993) argues that as trust grows, alliance partners are increasingly willing to put themselves at risk, for example through intimate disclosure, reliance on the counterpart’s promises, or sacrificing present rewards for future gains.

**Proposition 1a:** Own trust increases own cooperation.

A party’s cooperative behavior may also be influenced by the *partner’s* trust. We argue that this is likely to be so for two reasons: one normative, and one instrumental. First, trust has a normative element: Parties recognize, internalize and feel bound by values of fairness, cooperation and reciprocity, which may induce each other into cooperation (e.g., Koeszegi, 2004; Madhok, 1995; Parkhe, 1998). Thus a party who has earned another’s trust will feel bound to honor that trust, and therefore behave cooperatively rather than competitively toward the other. Second is an instrumental reason: greater sanctions are usually reserved for individuals or
groups who, in behaving competitively, violate another’s trust, therefore concern about such sanctions may further encourage cooperation in response to another’s trust. Specifically, in a relationship in which trust had already been built, competitive behavior would be viewed as unexpected, would be a violation of the positive expectations that are the essence of trust, and therefore call for retribution or revenge. In contrast, if trust was not already present in the relationship, competitive behavior is less likely to be considered unusual or a violation of trust. Recognizing this, a party who is contemplating whether to behave in an exploitative or competitive manner should recognize that the sanctions will be greater in the presence of other’s trust than in the absence of greater trust.

Proposition 1b: Other’s trust increases own cooperation.

Yet some scholars have offered a dissenting view. They have noted that the additional opportunities for joint gain that are created by trust may also provide incentives for one partner to capture a larger proportion of that gain (Zaheer, McEvily, & Perrone, 1998). Also, the very presence of trust establishes the conditions for its abuse (Granovetter, 1985; McEvily, Perrone, & Zaheer, 2003). For example, a trusted partner may be inclined to compete not only because of the increased incentives, but also because of a belief that the malfeasance will go undetected due to high trust. In essence, what we are arguing is that other’s trust may have a positive (proposition 1b above) and negative (proposition 1c below) effect on own cooperation. As will be noted in the Discussion section of this paper, for certain paths in our theoretical model, valid arguments can be developed for positive and negative effects, and the extant research is not sufficiently conclusive to determine the precise nature of the effect. In all likelihood, this means that contingencies exist that cause the effect to be positive in some situations and negative in
others. Accordingly, in our research agenda we will emphasize the importance of research that seeks to uncover such moderators and test their effects.

**Proposition 1c:** Other’s trust decreases own cooperation.

*Monitoring.* Although monitoring is frequently cited as a determinant of cooperation, researchers have not always recognized that it can serve at least two roles. First, it can provide information about the other party’s behavior, which is critical in a social dilemma because cooperation, by definition, requires that parties coordinate their behavior. Early game theory researchers realized that, lacking evidence that one’s counterpart will cooperate, the most rational individual strategy is to compete, which suggests that monitoring may be an important determinant of cooperation. And monitoring activities, such as prearranged progress reports and milestone dates (Powell, 1996), increase the speed and reliability with which alliance partners learn about each others’ actions, and ultimately are able to reciprocate each others’ cooperative behavior (Parkhe, 1993: 801).

Of course, whether own monitoring has a positive or negative effect on own cooperation depends in large part on the outcomes of the monitoring. If through monitoring one finds that the other is behaving competitively, one may “fight fire with fire” and compete in response, or one may even withdraw from the relationship. However, there are several reasons to expect that one is more likely to uncover cooperative behaviors than competitive behaviors via monitoring. First, research indicates that people tend to demonstrate unusually high levels of cooperation in early stages of relationships (Kelley & Stahelski, 1970). If monitoring is present early on to detect such cooperation, then there is a strong likelihood that the cooperation will be reciprocated (own monitoring will increase own cooperation). Second, the expectation of monitoring itself can lead to increased cooperation (proposition 2b below), and as we discuss later in the paper, so long as
that monitoring is considered appropriate, it is likely to encourage cooperation. And third, it is unlikely that successive monitoring will continue to uncover successive competition over time. Essentially, a discovery of competitive behavior in an interdependent relationship will usually cause one to either renegotiate expectations to gain assurance that the other will behave more cooperatively in the future (in which case future monitoring should uncover future cooperation), or withdraw from the relationship entirely.

Proposition 2a: Own monitoring increases own cooperation.

Monitoring’s second role is that it may influence another’s behavior, that is, act as a control mechanism. In a social dilemma, the greatest returns from competition occur when, over an extended period of time, one party is able to compete while the other cooperates. This is most likely to occur in the absence of monitoring, since monitoring would allow the cooperating party to recognize and sanction the competitive behavior. Thus as one’s monitoring increases, the partner’s returns to competitive behavior should decrease, causing the partner to become more cooperative. It has been noted that if strategic alliance partners have frequent opportunities to monitor one another, they are likely to perceive that the returns on exploitation will be reduced since exploitation is likely to be discovered at an earlier stage (Nooteboom, Berger, & Noorderhaven, 1997; Parkhe, 1993: 801). Monitoring is also used to address interpersonal-level social dilemmas, for example in the workplace. Managers perform a variety of monitoring behaviors such as standing over their employees, checking up on them, and observing them, in order to ensure that they are working toward the company’s objectives rather than their own selfish objectives (Perlow, 1998).

Proposition 2b: Other’s monitoring increases own cooperation.
However, monitoring may also decrease cooperation. Parties may be motivated to cooperate with one another because of intrinsic factors (e.g., not violating another’s expectations) as well as extrinsic factors (e.g., individual gain). When individuals think their behavior is under the control of extrinsic factors such as monitoring, their intrinsic motivation to perform the behaviors the monitoring was intended to enforce may actually be undermined (Kramer, 1999). In essence, the intrinsic reward from behaving in a positive way derives in part or whole from knowing that one has chosen to behave in that way, and because the behavior is voluntary, it represents a positive manifestation of one’s nature and identity. If on the other hand one views the cooperative behavior as motivated by some external control mechanism, the behavior cannot be viewed as very indicative of one’s nature and identity, and therefore the internal motivation to perform the behavior is impaired. And since external control mechanisms such as monitoring are nearly always imperfect (one’s boss cannot monitor 100% of one’s behaviors), the impairment of internal motivation is likely to result in a net decrease in cooperative behaviors.

Proposition 2c: Other’s monitoring decreases own cooperation.

Interaction of trust and monitoring. Several authors have noted that parties may rely on trust, monitoring, or some combination of the two to procure cooperation. Our discussion thus far suggests that trust and monitoring jointly and independently contribute to cooperation (Das & Teng, 1998). Ouchi (1979: 846) offered a potentially different view with his observation that “People must either be able to trust each other or to closely monitor each other if they are to engage in cooperative enterprises.” This suggests that trust and monitoring may interact: As trust increases, monitoring is obviated; as monitoring increases, trust is obviated. At the interpersonal level, it can be argued that people must be able to either trust or monitor each other if they are to
engage in cooperative enterprises (McAllister, 1995). Consistent with this argument, Bromiley and Cummings (1995) argued that “you should spend less to monitor highly trustworthy individuals than less trustworthy individuals.” Similarly, Parkhe (1998) observes that trust plays a less significant role, and less trust is required, in situations in which a company possesses relatively complete, accurate, and timely information about a partner firm. And Bijlsma-Frankema and Koopman (2004) recognize that many of today’s organizations must choose between using traditional command-and-control approaches, versus more contemporary forms of control such as trust-based governance. Thus, trust and monitoring function may function as substitutes or alternatives for each other. Specifically, with higher levels of trust, monitoring is unlikely to have much effect on cooperation. But for lower levels of trust, monitoring is likely to have a stronger effect on cooperation.

Proposition 3: Other’s trust and other’s monitoring interact as determinants of own cooperation. As trust increases, monitoring will have a weaker effect on cooperation; as trust decreases, monitoring will have a stronger effect on cooperation.

Cooperation. Researchers often recognize that cooperative behavior is self-perpetuating, due principally to the tendency of parties to reciprocate their partners’ behavior. Perhaps the most powerful finding in game theory research is that cooperative behaviors, when reciprocated, tend to spiral into ever higher levels of cooperation (e.g., Axelrod, 1984; see Dawes, 1980; Komorita & Parks, 1995; Messick & Brewer, 1983; Pruitt & Kimmel, 1977 for selected reviews of the game theory literature). Game theory researchers have found that if cooperative behavior can be established early, parties tend to lock into this behavior (Pilisuk & Skolnick, 1968). The dynamics of reciprocation are also recognized in several theories such as social exchange (Blau, 1964) and social influence (Cialdini, 2001) which, along with game theory, have been used to
explain why people in interpersonal work relationships and negotiations are inclined to reciprocate each others’ cooperative behaviors. In addition, the process of developing cooperation in strategic alliances has been described as iterative – “the level of cooperation increases with each agreement between the same partners” (Powell, 1996).

Proposition 4: Other’s cooperation increases own cooperation.

Determinants of Trust

Monitoring. A party’s efforts to monitor a partner’s behavior may adversely affect the party’s feelings concerning their relationship (Ghoshal & Moran, 1996). Consequently, by undertaking behaviors to monitor a partner, a party might actually reduce its level of trust in the partner. A theoretical basis for this prediction is provided by self-perception theory (Bem, 1972), which posits that individuals use their own past behavior as a source of information for understanding their own attitudes and beliefs. Strickland (1958) found that managers developed lower levels of trust in subordinates whom they were experimentally directed to monitor more. And venture capitalists’ trust in entrepreneurs has been found to be negatively correlated with frequency of monitoring in lab and field settings (Sapienza & Korsgaard, 1996).

Note that self-perception theory is an inherently intrapersonal phenomenon, therefore the above argumentation might be considered likely to apply only between individuals (i.e., at the interpersonal level). However, our earlier observation that less trust is required when one has adequate information about a partner (Parkhe, 1998) suggests that groups as well as individuals, who have the ability to monitor their partner, may have a lower motivation to develop trust in their partner. Put simply, if a party is primarily worried about being exploited, and the party has the ability to monitor the partner’s behavior to a substantial degree, then the party can be assured that if any exploitation occurs or is about to occur, it can be responded to extremely rapidly, for
instance by threatening to retaliate, or withdrawing from the relationship before harm can be done. By reducing this downside risk, trust becomes relatively irrelevant, and therefore the party may devote little time or effort into even assessing trustworthiness. For instance, the party may not take the time or effort to carefully consider the trustworthiness of the partner, either by reviewing the partner’s past behaviors performed toward the party itself, or by reviewing the partner’s past behaviors toward trusted others. Without devoting this time to consider trustworthiness, the party is unlikely to build a high level of trust in the partner.

Proposition 5a: Own monitoring reduces own trust.

Yet monitoring may also signal low trust, and thereby breed mistrust (Cialdini, 1996). A party may interpret a partner’s monitoring behavior as an indicator of low trust. If one were subjected to heavy monitoring from a partner, it would be reasonable to infer that the partner is highly concerned about being exploited. This suggests that the partner has few positive expectations about the party’s behavior, which can easily be equated to a belief that the partner has little trust in the party (Das & Teng, 1998; Zand, 1972). Since parties are naturally motivated to reciprocate trust (proposition 8), the monitored party may then develop lower trust in the partner. Furthermore, formalized management control systems (which would include but not be limited to monitoring) appear to damage trust because they undermine the sense of value congruence, convey disrespect, and threaten the monitored party’s sense of professional autonomy and competence (Sitkin & Stickel, 1996). Consistent with these arguments, employees have been found to trust superiors less when they perceive that the superiors’ monitoring is intended to control their behavior (Etchegaray & Jones, 2001).

Proposition 5b: Other’s monitoring reduces own trust.
Yet, a strikingly different conclusion about the effect of other’s monitoring on own trust can be found in the work of Bijlsma-Frankema and van de Bunt (2003). In a qualitative and quantitative study of manager-subordinate relationships in a hospital setting, they hypothesized and found that the frequency of managers’ monitoring was positively related to subordinates’ trust in the managers. In this research setting, subordinates viewed their managers’ monitoring as a demonstration of care, which enabled the managers to provide feedback on performance, appreciate good work, and provide support and guidance. In contrast, managers who monitored infrequently were assumed to be aloof and uninterested in their employees. Consistent with this finding, Sitkin and George (2005) noted that managers may actually use controls as a way of building trust by signaling that they are following socially- and emotionally-appropriate practices. At any rate, the fact that this finding directly contradicts the more frequently-observed Proposition 5b above suggests that the valence of the effect may be contingent on contextual factors. We will further consider this possibility in the Discussion.

Proposition 5c: Other’s monitoring increases own trust.

Cooperation. A party can also utilize direct experience and knowledge of a partner’s past cooperative behavior as a source of information for drawing conclusions about the partner’s trustworthiness. Game theory researchers recognized that cooperative processes led to trusting attitudes (Deutsch, 1980), although they did not test this proposition directly. Negotiation parties develop trust in a partner in response to the partner’s cooperative behaviors (e.g., information sharing and pursuit of the party’s interests (Butler, 1995)). Several interpersonal trust theories (e.g., Lewicki & Bunker, 1996; e.g., Mayer, Davis, & Schoorman, 1995) posit that trust between individuals is largely built on past behavior. And firms develop trust in each other through ongoing interaction, which permits them to learn about each other (e.g., Gulati, 1995; Ring &
Van de Ven, 1992), although again the relationship between past cooperation and trust as a perceptual variable has seldom been examined.

*Proposition 6a:* Other’s cooperation increases own trust.

One’s own behavior may also influence trust, although this effect has received less research attention. Self-perception theory (Bem, 1972) again provides an explanation for this effect, suggesting that parties who wish to gauge their level of trust in a partner will refer to their own past cooperative behavior as an indicator of their level of trust in the partner. Field experimental evidence for this effect was provided by Koller (1988), who found that subjects who were asked to voluntarily put themselves at high risk to another individual developed higher trust in the individual than subjects who were asked to voluntarily put themselves at low risk to the individual. Self-perception is clearly an intrapersonal theory, therefore this proposition can be expected to apply in interpersonal relationships. Unfortunately, self-perception theory does not yet appear to have a group-level analog, which leaves an open question about whether the proposition would also apply in intergroup relationships. Perhaps groups also infer their beliefs and attitudes from their behavior. If they do, it will be very interesting for theory in general, as well as for our understanding of intergroup cooperation and trust, to understand how groups perceive their behaviors and then convert their perceptions into beliefs and attitudes.

*Proposition 6b:* Own cooperation increases own trust.

*Interaction of monitoring and cooperation.* Theories that specify an effect of other’s cooperation on own trust (proposition 6a) implicitly assume that the other’s past behavior is visible. Often it is not. Some partners work at such a distance from their partners (e.g., working in different geographic locations, or different shifts) that they have only minimal information about the partner’s behavior. Even in normal circumstances, it would be extremely rare for a
party to be in such constant, close proximity with a partner within a work setting that the partner’s behaviors are 100% visible. And if it is unlikely that one individual will fully observe another’s behavior, it is even less likely that one group will fully observe another’s behavior, since the constituent members of the group to be observed are conducting a relatively larger range of behaviors in a variety of locations. To provide a specific example, organizational citizenship behaviors are behaviors of a voluntary nature that are beyond one’s job role, but are cooperative in the sense that they are intended to benefit the organization (Organ, 1988). Such behaviors are often performed for impression management purposes (Bolino, 1999), in which case one would expect that they would only be performed when they are likely to be visible. However, they are also performed for altruistic motives (Bolino, 1999), in which case there is unlikely to be an attempt by the performer of the OCBs to ensure they were viewed by others. Similarly, groups and organizations often take organizational actions that benefit other groups, or the broader organization or industry, but are not immediately or fully visible to other groups and organizations.

Monitoring represents a way of increasing the visibility of another’s behavior, and thereby represents a potential avenue for developing a clearer and more accurate trusting belief (Leifer & Mills, 1996). In this way, own monitoring facilitates the effect of other’s cooperation on own trust: If other’s cooperation is not transparent, then it will only influence own trust in the presence of own monitoring. To the extent that a party can monitor a partner’s behavior, then partner cooperative behavior is likely to increase trust and partner competitive behavior is likely to decrease trust. However, to the extent that a party is unable to monitor the partner’s behavior, the partner’s behavior is unlikely to have much, if any, effect on the party’s trust in the partner.
Proposition 7a: Other’s cooperation and own monitoring interact as determinants of own trust. Other’s cooperative behavior performed in the presence of own monitoring will have a relatively strong effect on own trust, whereas other’s cooperative behaviors performed when own monitoring is absent will have a relatively weak or nonexistent effect on own trust.

Meanwhile, as described above, self-perception theory (Bem, 1972) suggests that we infer our attitudes and beliefs from our own behavior: behaviors that are judged as caused by external factors are thought to be relatively undiagnostic of one’s internal attitudes and beliefs, whereas behaviors that are judged to be a result of internal factors are thought to be much more diagnostic of one’s internal attitudes and beliefs (Kelley, 1973). Accordingly, we expect that own cooperative behaviors performed when one is being monitored by a partner are likely to be judged as due to external factors (the monitoring), since most people will recognize that monitoring often shapes behavior (propositions 2b & c). Consequently, such behavior will be considered to be unreflective of internal factors, specifically one’s own trust. In contrast, cooperation performed in the absence of monitoring is relatively more likely to be judged as due to internal factors, in this case one’s trust in the partner. Thus, cooperative behavior performed in the presence of monitoring is unlikely to affect one’s trust in the partner, whereas cooperative behavior performed in the absence of monitoring is likely to have a positive effect on one’s trust in the partner. Again, since self-perception theory does not yet appear to have a group-level analog, we cannot say whether the proposition would also apply in intergroup relationships.

Proposition 7b: Own cooperation and other’s monitoring interact as determinants of own trust. Own cooperative behavior performed in the absence of other’s monitoring will have a relatively strong effect on own trust, whereas own cooperative behaviors performed in the presence of other’s monitoring will have a relatively weak effect on own trust.
Trust. The concept of mutual trust implies that trust exhibited by one party toward a partner may influence the level of trust the partner has in the party. Indeed, scholars have argued that trust becomes reciprocated within dyadic relationships (Butler, 1995; Golembiewski & McConkie, 1975), and have provided some evidence to that effect in interpersonal work relationships (Butler, 1983) and in interfirm alliances (Johnson, Cullen, Sakano, & Takenouchi, 1996).

Why might trust be transmitted from one party to another? Several explanations for the effect can be provided. First, according to the symmetry principle of Heider’s balance theory (1958), close proximity and frequent interactions alone may be sufficient to cause individuals to develop similar sentiments toward each other. Additionally, social exchange theory (Blau, 1964) indicates that individuals exchange intrinsic social rewards (e.g., trust for each other) as well as extrinsic rewards. Thus, an individual may perceive a certain level of trust held by the other party, and feel motivated to reciprocate by forming a similar level of trust. The transmission of trust may also be spurred by the tendency of parties to increase (or decrease) communication quantity and quality, which then provides a yet stronger (or weaker) foundation for future trust (Robinson & Rousseau, 1994; Zand, 1972). For example, a partner’s low trust may cause the partner to withdraw from communication or communicate in a way that intentionally or unintentionally conveys discomfort with the relationship. However, the party may interpret this as evidence that the partner is untrustworthy. And finally, trust may beget trust not only because of the effects trust has on behaviors such as communication between the two parties, but also because it may influence how parties perceive each others’ behavior (Robinson, 1996). Thus positive trust perceptions within a dyad could lead to more trust, while negative perceptions
within a separate dyad could lead to less trust, even if the behaviors were identical across the two dyads.

*Proposition 8*: Other’s trust predicts own trust.

Determinants of Monitoring

*Trust*. If parties can use some combination of trust and monitoring to influence the level of cooperation (proposition 3), then for a given level of cooperation they should be compelled to reduce monitoring in response to high trust, and increase monitoring in response to low trust. Several descriptions of trust’s negative influence on monitoring are available. Ross and LaCroix’s (1996) integrative model shows that trust reduces verification mechanisms intended to ensure fairness. In interpersonal relationships, trust may forestall the monitoring and evaluation of a partner’s behavior (Bigley & Pearce, 1998), whereas a lack of trust will cause one to impose controls on the other party (Zand, 1972). Bromiley and Cummings (1995) recognize that as trust increases, monitoring will become less necessary for procuring cooperative behavior, and will therefore decrease. McAllister (1995) predicted that trust would produce lower levels of control-based monitoring. Klein Woolthuis, Hillebrand, and Nooteboom (2005) found that in high-trust interfirm relationships parties tended to forego formal contracts with their concomitant monitoring, whereas in low-trust relationships parties placed a great emphasis on contracts. And Uzzi (1997) speculated that trust acted as a heuristic in interfirm relationships: Parties who trusted their partner had a predilection to assume the best when interpreting the partner’s motives and actions, and therefore monitored less.

*Proposition 9*: Own trust decreases own monitoring.

*Cooperation*. Because monitoring is usually costly, and may have a negative impact on trust (propositions 5a & b) and cooperation (proposition 2c), in most cases it will be advisable to
monitor only when it is necessary to protect oneself or control the other party’s behavior. Monitoring should therefore decrease as it becomes less necessary. In particular, if a partner has a history of cooperation, a party is likely to be motivated to reduce monitoring given its costliness and possible negative effects on trust and cooperation. The converse is also true. For instance, when organizations observe or are concerned that employees are not working toward the good of the organization, they are more likely to implement controls such as monitoring to encourage greater cooperation, and also detect competitive and exploitative behaviors (Leifer & Mills, 1996).

**Proposition 10:** Other’s cooperation decreases own monitoring.

**Monitoring.** The processes that result in reciprocity in behaviors such as cooperation (proposition 4) are also likely to result in reciprocity in monitoring. If individuals or groups observe that their partner has monitored them, they may feel inclined to reciprocate, and this inclination may be heightened due to perceptions either that monitoring is necessary, and/or that a norm of monitoring is being established. Sitkin and Roth (1993), in fact, describe how a party’s attempt to implement controls on another can lead to an “inflationary spiral” of increasingly formalized relations between parties.

**Proposition 11:** Other’s monitoring predicts own monitoring.

**Differences Across Levels**

Finally, although most of our propositions are expected to apply in intergroup as well as interpersonal relationships, we do not argue that intergroup relationships will necessarily have the same mean levels of trust, monitoring, and cooperation as interpersonal relationships. Instead, we expect that intergroup relationships will have lower trust and cooperation. In intergroup relationships, group affiliation makes the ingroup-outgroup distinction salient,
causing group members to favor their own group over the other. And unlike individuals, group members have an opportunity to converse within their groups. Consequently, a group member who advocates pursuit of a group’s self interest will receive support within a group that an individual acting alone cannot receive (Insko & Schopler, 1987). This should cause groups to behave more competitively than individuals acting alone. Group members also tend to believe that intergroup interactions are by nature more contentious than interpersonal interactions (Insko et al., 1993). Consequently, they develop relatively low levels of trust in an opposing group, and cooperate with them less.

Proposition 12: Intergroup cooperation will be lower than interpersonal cooperation, and intergroup trust will be lower than interpersonal trust.

Discussion

By distinguishing between own and other’s trust, monitoring, and cooperation, and drawing on insights from four literatures and two different levels of analysis, we have developed a relatively comprehensive theoretical model of the relationships among trust, monitoring, and cooperation in interpersonal and intergroup relationships. We have argued that, with a handful of specific exceptions detailed in propositions 6b, 7b, and 12, the propositions appear to have logical validity at both levels of analysis and are likely to apply in game theory, interpersonal trust, negotiation, and IOR contexts. On reflection, most but not all of our propositions have received at least some theoretical and/or empirical attention in at least one of the literatures. However, what is more surprising is that few of the propositions have even appeared in all four literatures, and none of them have been conclusively posited and tested in all four literatures. These observations underscore the value of our contribution: developing a theoretical model that can potentially describe the effects of trust, monitoring, and cooperation in a range of settings,
and can shed light on theoretical “blind spots” that have arisen in specific literatures due to a lack of prior cross-fertilization.
Research Contributions

We adopted an approach proposed by Morgeson and Hofmann (1999), focusing on the functions of constructs at different levels of analysis rather than their structure. But even in adopting this approach, we did not simply assume that our propositions would generalize across levels, nor did we simply ignore the question of whether the constructs might or not have similar structures across levels. Instead, we carefully considered the extent to which trust, monitoring, and cooperation are defined similarly across levels and research streams. We also considered whether the context of trust, monitoring, and cooperation is sufficiently similar across levels and research streams to consider propositions that might apply across these different areas and levels. And as we developed our propositions, we considered whether the supporting logic could be expected to apply at multiple levels, and flagged those propositions that relied on a logic that would not necessarily be expected to do so.

There are of course divergent views of how trust, monitoring, and cooperation should be defined within each of the literatures addressed in this paper: game theory, interpersonal trust, negotiation, and IORs. However, our analysis indicates that at least for the definitions adopted in this paper, there is substantial conceptual similarity across these four research streams. Additionally, these streams posit a similar context for trust, monitoring, and cooperation, i.e., a context in which individuals and groups are simultaneously motivated to cooperate and compete with each other. We also found that, with two specific exceptions (see propositions 6b & 7b), our propositions appear valid for intergroup as well as interpersonal relationships. These findings provide exciting insights for scholars of trust, monitoring, and cooperation, allowing cross-fertilization across levels and areas. In essence, we have provided a more comprehensive model
that scholars working in each specific area can turn to in order to better understand how trust, monitoring, and cooperation may be interrelated.

We have argued that it is important to distinguish between own and other’s trust, monitoring, and cooperation so that the interdependencies in interpersonal and intergroup interactions can be better understood and appropriately modeled. Although this distinction may seem intuitively obvious, it has not received adequate recognition in theoretical or empirical research. One contribution of our theoretical model is that it provides a more precise understanding of the relationships among trust, monitoring, and cooperation by explicitly recognizing this important distinction. A second potential contribution is that it should help researchers better specify the constructs under examination, and the interrelationships among those constructs.

An Agenda for Future Research

Our theoretical model also implies some apparent paradoxes and unanswered questions. For example: (1) Is it own trust (proposition 1a) or other’s trust (1b) (or both) that predicts own cooperation? (2) Does own trust predict own cooperation (proposition 1a) or does own cooperation predict own trust (proposition 6b) (or both)? And (3) does other’s trust have a positive effect on own cooperation (proposition 1b), or a negative effect (proposition 1c) (or both)? Thus, while the model adds considerable insight into the relationships among trust, monitoring, and cooperation, it equally calls out for more research to better understand the interrelationships. These three example questions highlight three important elements of our proposed research agenda: (1) research that embraces the “own vs. other” distinction; (2) research that assesses the causality of relationships; and (3) research that considers the
contingent nature of relationships, including the extent to which propositions will hold across levels.

*Research that considers the distinction between “own vs. other’s” trust, monitoring, and cooperation.* Our distinctions between “own and other” provide very important implications for future research. First, and most obviously, it is important that these distinctions are embraced conceptually and empirically by defining and operationalizing constructs in a way that makes the distinction explicit. This will help the field move beyond relatively simple questions of whether trust and monitoring influence cooperation (for example), to better-specified questions of whose trust and whose monitoring influences whose cooperation. Second, and perhaps less obviously but equally important, studies that do not consider the effects of own and other’s beliefs and behaviors on the criterion variable may be underspecified since they do not adequately consider plausible alternative predictors for the criterion. And yet, to consider the flip side of this coin, since levels of trust tend to be correlated within interpersonal and intergroup dyads (proposition 8), as are cooperation levels (proposition 4) and monitoring levels (proposition 11), datasets that appropriately include own and other’s trust, own and other’s monitoring, or own and other’s cooperation as predictor variables are likely to suffer from statistical nonindependence, and will therefore violate the independence assumption of ordinary least squares methods. Fortunately, empirical methods are emerging that allow researchers to embrace such interdependence rather than attempting to assume it away. Of particular note, the Actor-Partner Interdependence Model (Kashy & Kenny, 2000) is a promising new dyadic (interpersonal or intergroup) analytical approach that allows the researcher to empirically distinguish between partner effects (e.g., the effects of a partner’s cooperation on one’s own trust (proposition 6a) from actor effects (e.g., the effects of one’s own cooperation on one’s own trust (proposition 6b)) among members of
interacting dyads, even when their trust in each other, monitoring of each other, and/or cooperation toward each other are significantly correlated within the dyad.

*Research that considers the causality of relationships among trust, monitoring, and cooperation.* Many of the relationships that we have considered are likely to be recursive. Cooperation is likely not only to be transmitted from one party to another, but is also likely to cycle back to the former party, setting off a spiral of dyadic cooperative behaviors that increases over time. Competitive behaviors may set off a spiral of dyadic behaviors that become increasingly competitive over time. And similarly, trust may be transmitted not only from one party to another, but also back to the former party, forming a spiral of trust within a dyad that may increase or decrease over time. Several researchers have recognized the possibility of such spirals in interpersonal and intergroup relationships (Golembiewski & McConkie, 1975; Inkpen & Currall, 2004; Sydow, 1998; Zand, 1972). Yet, research in this area is nascent at best. Thus, across all four literatures, studies are needed that directly assess the direction of causality, and in doing so can assess the potentially recursive nature of relationships among the variables.

Even more challenging, but equally important, are studies that assess how trust, monitoring, and cooperation might develop between individuals or groups over time. In fact, our theoretical model provides a valuable foundation for such insights. As discussed previously, in the interest of tractability we focused only on simple (bivariate or moderated) effects. However, since all the propositions are causal, they can easily be combined to describe *processes* through which trust, monitoring, and cooperation may develop, be reciprocated, and become mutualized. For instance, Propositions 5a and 1a can be combined to understand how own monitoring will have a negative effect on own cooperation *via* own trust. And, since our model distinguishes between own and other’s trust, monitoring, and cooperation, and recognizes that each of these
can be an outcome as well as a predictor, it provides the ingredients for building process theories of how trust, monitoring, and cooperation develop between individuals and groups. For instance, Propositions 6a and 1a can be combined to better understand the reciprocation and eventual mutualization of cooperation: other’s cooperation affects own cooperation via own trust. And, to add complexity and perhaps some additional understanding, Propositions 10, 5a, and 1a can be combined to understand how other’s cooperation affects own cooperation via own monitoring and own trust. As should be obvious, a large number of potential mediation hypotheses can be logically developed from the simple propositions of this paper. In our view, this large number of potential hypotheses casts light on the complex nature of interpersonal and intergroup processes, and also highlights the theoretical and empirical challenges involved in understanding such complex processes. Thus, we hope that our paper will add to the existing efforts (e.g., Lewicki & Bunker, 1996; Nooteboom, 1996; Ring & Van de Ven, 1994; Sydow, 1998; Zand, 1972) to understand and model processes of trust, cooperation, and monitoring development.

Research that considers the contingent nature of the relationships among trust, monitoring, and cooperation. In the interest of tractability, we focused on only three constructs: trust, monitoring, and cooperation. Of course, in an organizational or business context these constructs will not operate in a vacuum. A wide range of individual, managerial, organizational, cultural, institutional, and other factors exists that may influence the degree of trust, monitoring, and cooperation that occur in a given relationship, and may also impact the interrelationships among trust, monitoring, and cooperation (Bijlsma-Frankema & Costa, 2005). In future field studies it will be important to theorize or control for such factors. Given the fundamental role that trust, cooperation, and monitoring play in organizational life, the optimal way to move forward will be a combination of theoretical, field, and laboratory studies that can complement
each other, and compensate for each others’ weaknesses, to validate and extend the propositions presented in this paper.

Our theoretical model helped us to highlight certain sets of relationships in which moderators are very likely to be important. First, propositions 1b and 1c predicted positive and negative effects of other’s trust on own cooperation, respectively. At this point we speculate that the valence of the effect will depend to a great degree on relationship length. In established relationships, parties are likely to have developed norms of fairness and reciprocity, and parties will also be aware of the fact that a violation of trust would not only be counter-normative, but also would invite a disproportionate sanction (proposition 1b). In contrast, in new relationships parties are unlikely to have developed such norms, and due to the absence of such norms would not impose such harsh sanctions in response to competitive behavior. Consequently, the normative and instrumental “discouragements” are relatively weak, which should make exploitation more profitable and therefore more likely (proposition 1c). Second, propositions 2b and 2c predicted positive and negative effects of other’s monitoring on own cooperation, respectively. We speculate that the valence of this effect will depend to a great degree on the norms of the situation. For relationships in which monitoring is considered normatively appropriate (e.g., a boss monitoring a subordinate’s task performance; joint venture partners monitoring each other in accordance with previously-agreed contractual procedures), monitoring is likely to help ensure that the other party is behaving cooperatively rather than competitively (proposition 2b). However, if the monitoring is considered normatively inappropriate (e.g., a subordinate monitoring a boss; a joint venture partner monitoring in a way that is inconsistent with contractual agreements and/or established industry practices), the monitoring may stimulate
resentment and resistance rather than cooperation (proposition 2c) (Bijlsma-Frankema & Koopman, 2003).

As noted previously, in our theorizing we assumed that parties were relatively equivalent in power and status. In relationships where there are power or status differences, the interrelationships among trust, monitoring, and cooperation are also likely to differ. For instance, as noted above, monitoring of a boss by a subordinate, or a joint venture partner acquiring its counterpart’s confidential documents, is likely to be considered completely inappropriate, resulting in reduced cooperation and trust (propositions 2 & 5). Similarly, monitoring will usually be considered more appropriate for parties who are unfamiliar, and relatively less appropriate for parties who are familiar with each other. In combination, the above arguments suggest that the appropriateness of monitoring – which could be attributable to any number of factors ranging from hierarchical or status differences, industry norms, contractual or informal agreements, and the length and depth of the relationship – is likely to be an important contingency in the relationships between monitoring on the one hand, and trust and cooperation on the other hand. This observation may also shed light on Propositions 5b and c, which predicted that other’s monitoring would have a negative and positive effect on own trust, respectively. Again, it is likely that the meaning ascribed to the monitoring behavior, and especially the extent to which it is considered appropriate in the situation, will determine whether it has a negative or positive effect on trust. Altogether, the insights above suggest that one important avenue for future research is to consider not just the effects of monitoring per se, but also how monitoring is interpreted, and the factors that lead it to be regarded as appropriate or inappropriate. To provide one specific example, Gillespie and Mann (2004) argued that leader monitoring behaviors would predict subordinate trust in industries where close attention and
adherence to procedures, rules, and regulations is necessary, but that in other industries the same leader monitoring behaviors would not have a positive effect on subordinate trust.

Finally, research might consider whether the propositions in this paper behave differently in relationships that have relatively high levels of mutual trust, mutual cooperation, and/or mutual monitoring, as compared to relatively low levels of mutual trust, cooperation, and/or monitoring. Such studies would undoubtedly capture an important part of the reality of organizational life. Yet, at the same time, studying this will be challenging from a research design standpoint because the contextual variable (extent to which trust, monitoring, and/or cooperation are mutualized) has the predictors and outcomes (own and other’s individual levels of trust, monitoring, and cooperation) as its constituent parts.

**Extensions of the Theoretical Model**

*Nonlinear propositions.* The relationships among the three variables may also not be linear. For example, a party may conclude that the partner’s past behavior is so consistently competitive or cooperative that it is unlikely to change. In these cases, monitoring is unlikely to provide useful information or in any way influence the behavior of the other party. This perspective suggests that cooperation may have a curvilinear effect on monitoring: Monitoring will occur more often for moderate levels of cooperation than for high and low levels of cooperation. While such a relationship seems intuitively feasible, we felt it was important to avoid such complex propositions in this early stage of research. Yet we also welcome research that recognizes the potential nonlinearity of effects.

*Cross-level effects.* Researchers of IORs sometimes draw on interpersonal-level theory, such as the trust model proposed by Mayer et al. (1995), to hypothesize intergroup effects. This tendency may arise in part because the groups that trust, monitor, and cooperate with each other
in IORs are in fact made up of individuals. This means that the dynamics of interpersonal-level trust, monitoring, and cooperation are in essence nested within intergroup-level trust, monitoring, and cooperation. The present paper focused on interpersonal- and intergroup-level phenomena, but stopped short of positing any cross-level effects. Nevertheless, such effects are a reality of groups and organizations, and accordingly represent an important avenue for future research. We hope that by providing a number of insights into phenomena that occur at the interpersonal and intergroup levels, we have provided a foundation for future cross-levels studies.

*Implications for Practice*

Cooperation is a central concern for many managers, such as those responsible for joint ventures (who need to be concerned about being exploited by a partner), for internal allocation of resources (who need to be concerned that resources are allocated according to the organization’s interests rather than the interests of individual units), and for management of staff (who need to be concerned that employees’ efforts are directed toward the well-being of the organization rather than their own selfish interests), to name but a few. Trust and monitoring have often been recognized as potential determinants of cooperation, yet most managers probably do not comprehend the complex influences that trust, monitoring and cooperation may have on each other. The theoretical insights in this paper may help managers better understand the relationships that exist among the three concepts, select more appropriate interventions, and better anticipate the effects of those interventions. To provide just one example, managers are naturally inclined to ramp up monitoring in response to exploitative or competitive behaviors performed by partner individuals (e.g., self-promotion at the expense of the organization’s interests) or groups (e.g., a department making a power grab for additional funding, or a joint
venture partner developing an alliance with one’s competitor). This may indeed increase the partner’s cooperative behavior (and decrease competitive behavior) (proposition 2b). However, if the manager was familiar with our theoretical model, he or she would also recognize that the monitoring might also decrease the level of the partner’s cooperation (proposition 2c). And perhaps even worse, the monitoring is also likely to reduce trust in the partner (proposition 5a), and the partner’s trust in the manager or manager’s group (proposition 5b), and cause the partner to increase monitoring in response (proposition 11). This suggests that, at best, the ramping up of monitoring will be a double-edged sword, and at worst, it may cause more harm than good. Managers faced with such a situation should therefore consider more creative responses that either attempt to strengthen the relationship, or at least anticipate the potential ramifications of increased monitoring on present and future relationships, rather than simply responding by monitoring more.

Conclusion

The relationships among three variables such as trust, monitoring and cooperation would seem to be relatively straightforward and tractable. At a minimum, we hope that we have demonstrated otherwise. By distinguishing between actor and partner effects in dyadic relationships, we were able to develop a large number of theoretically-sound propositions describing how the three constructs may be related. And by recognizing that constructs may have similar functions across levels, we were able to develop propositions at two different levels of analysis. We have proposed an ambitious agenda for research that will enable scholars to better understand the relationships among trust, monitoring, and cooperation. Obviously, a great deal of work remains to be done, yet the scale of this future research is matched by the importance of the problem, given the fundamental importance of trust, monitoring, and cooperation to individual
and organizational functioning. Meanwhile, we have focused on only two of the many correlates of trust. Beyond the specific research directions already discussed, we hope that our approaches toward identifying and developing multilevel theory and distinguishing between “own and other” effects will spur and guide future research on additional questions relevant to trust, monitoring, and cooperation in interpersonal and intergroup relationships.
References


FIGURE 1
Summary of Propositions

Determinants of Cooperation:

- Own Trust
  - 1a (+)

- Own Monitoring
  - 2a (+)

- Other’s Trust
  - 1b (+)
  - 1c (-)
  - 3

- Other’s Monitoring
  - 2b (+)
  - 2c (-)

Determinants of Trust:

- Own Trust
  - 5a (-)
  - 8 (+)
  - 7a

- Own Monitoring
  - 5b (-)
  - 5c (+)

- Other’s Trust
  - 6a (+)
  - 6b (+)

- Other’s Monitoring
  - 7b

Determinants of Monitoring:

- Own Trust
  - 9 (-)

- Own Monitoring
  - 10 (-)

- Other’s Monitoring
  - 11 (+)