An Examination of Communication Behaviors as Mediators in Individual-Level Interorganizational Exchanges

Chickery J. Kasouf
Worcester Polytechnic Institute

Kevin G. Celuch
University of Southern Indiana

John H. Bantham
Illinois State University

ABSTRACT

This research attempts to address some of the gaps in our understanding of individual-level interorganizational exchanges. To this end, a conceptual framework that integrates cooperative norms, communication behaviors, and perceived problem-solving efficacy is developed. Qualitative and quantitative methodologies were employed to explore relevance and significance of proposed constructs and relationships. Findings support the viability of constructs and proposed relationships. Specifically, communication behaviors were found to mediate the relationship between cooperative norms and problem-solving confidence to resolve conflict. These results hold implications for future research and management practice. © 2006 Wiley Periodicals, Inc.
Many business-to-business transactions are part of a continuing relationship between buyer and supplier (Webster, 1992). Indeed, the ability to establish collaborative relationships across organizational boundaries can be a source of competitive advantage (Christopher & Juttner, 2000; Jap, 1999; Liedtka, 1996; Sheth & Sharma, 1997). This point is underscored by Morgan and Hunt (1994) who note, “. . . to be an effective competitor in today’s global marketplace requires one to be an effective cooperator in some network of organizations” (p. 34).

Collaboration is a critical area of interest for both academics and managers in business-to-business marketing (e.g., Hutt & Speh, 2004; Morgan & Hunt, 1994; Vitale & Giglierano, 2002). As original equipment manufacturers (OEMs) expect more value-added engineering from suppliers, maintaining close working relationships with suppliers is an important part of product-development strategies (Kasouf & Celuch, 1997).

According to Hutt and Speh (2004), collaborative relationships involve close informational, social, and operational linkages. Yet, in the end, the ability of two organizations to coordinate activities and develop an effective relationship is driven by the many discrete but interrelated interactions among individuals (Smith, 1998; Vitale & Giglierano, 2002). As Jap (1999) observed, interpersonal relationships between boundary spanning personnel are the “microconditions that affect the dyad’s decision to exploit relationship distinctiveness and make specific investments” (p. 465). Similarly, Narayandas and Rangan (2004) and Tellefsen and Thomas (2005) concluded that interpersonal dynamics affect interorganizational commitment. Moreover, the perceptions of individuals in interfirm relationships drive their actions (Hopkinson, 2001).

Integrating the objectives of individuals across diverse organizations whose interests can easily conflict makes relationship management a difficult task. The quality of an interorganizational relationship depends on the many dyads and interactions among groups of employees who interact, negotiate, and deliver value to the partner organization. This is a process in which parties sometimes have conflicting priorities as companies focus on objectives that may be difficult to reconcile (e.g., customers pressuring for price concessions as increases in supplier R & D are expected). However, as Tellefsen and Thomas (2005) concluded, the bonds between individuals are critical for the development of relational exchanges between organizations.

The purpose of this article is to explain individual-level communication factors that affect relationship quality and, consequently, relationship success or failure. Using constructs from the buyer–seller relationship literature that have their origins in psychology, the article develops a framework that integrates normative and communication factors to explain their effects on perceived problem-solving efficacy, explores the relationships through qualitative and quantitative research, and discusses the findings and implications for future research and managerial practice.
Communication in Interorganizational Relationships

Communication is central to effective relationship management. Assael (1969) found that frequent communications were associated with constructive conflict management. Dwyer, Schurr, and Oh (1987) highlighted the significance of relationship expectations and bilateral communication processes, particularly in the relationship-exploration phase. Joshi and Arnold (1997) found that the relationship between supplier dependence and opportunism was moderated by the level of relational norms. Ohmae (1989) emphasized the importance of mutual expectations in collaborative relationships. Anderson and Narus (1990), in noting the interdependent nature of working partnerships, found communication to be a critical factor in cooperative relationships. Helper (1991, 1994) found strong relationships between interorganizational information flow and the effective use of engineering-related problem solving. Similarly, Ellram (1991) reported that poor communication was the most important barrier to success in international purchasing relationships and that early communication of specification changes was positively related to successful partnerships. In later work, Ellram and Hendrick (1995) found that buyers and suppliers both desired improvements in face-to-face and electronic communication.

In a study of network dyads in entrepreneurial organizations, Larson (1992) found that individual interactions were critical in building effective interorganizational linkages. As she noted, communication is critical throughout alliance development, from preliminary assessment, to the trial period (where interpersonal interactions develop routines), to the establishment of operational structures and controls. Operational integration between partners depended on dense communication linkages, including many linkages between the organizations.

Mohr and Spekman (1994) reported that higher levels of communication quality and information sharing were associated with more successful partnering, and Paun (1997) found that communications frequency was one of the factors that differentiated best supplier relationships from average relationships.

In a study of purchasing managers, Leuthesser (1997) found that relational behaviors, including initiating behavior (the extent to which the supplier proactively initiates efforts to better understand the customer), signaling behavior (providing advance information), and disclosing (the willingness of the supplier to provide information about itself) were related to perceived relationship quality.

Christopher and Juttner (2000) noted that supply chain integration is typically achieved through a greater transparency of customer requirements through the sharing of information. They concluded that coordinating interpersonal relationships was one of the critical elements of effective interorganizational relationships. Indeed, Haytko (2004) most recently observed that it is difficult for relationship participants to think in terms of interfirm relationships without thinking of interpersonal
relationships, as their day-to-day experience involves working closely with *individuals*. This is consistent with Tellefsen (2002), who found that satisfaction with individual interactions increased purchasing manager satisfaction with the relationship and commitment to the relationship.

Bantham, Celuch, and Kasouf (2003) extended work in the area by using dialectical and interdependence theory as orienting frameworks and further developed ideas implied in extant business perspectives. Their framework posited problem solving as the key “driver” of business relationships. More specifically, problem solving is conceived as mediating the influence of two significant “enablers” on relationship satisfaction and investments. In this framework, a *mindset* enabler is characterized as the awareness of and willingness to address the tensions inherent in business relationships. A *skill-set* enabler is conceived as consisting of communication behaviors that facilitate managing these tensions (i.e., non-defensive and active listening, self-disclosure, and editing).

Most recently, Claycomb and Frankwick (2004) identified a range of conflict-resolution mechanisms that firms may employ in their supply chain relationships. These include joint problem solving (which enhances partnership success), smoothing over issues (which does not solve basic problems and may ultimately escalate the conflict), and coercion (which can destroy the relationship). They argued that effective communication is important in resolving conflict between partners.

Clearly, communication is a significant facilitator of relationship development and effectiveness. However, note that a review of the extant literature suggests other salient constructs that are implicated in buyer–seller communication processes. The conceptual challenge is developing a framework to explain interorganizational linkages that are managed by individuals and that endure change and conflict. Significant research representing both the operations management and marketing streams of literature has added to our understanding of these cooperative relationships. However, critical gaps in our understanding of individual-level interorganizational exchanges are evident.

First, the extant literature has not always provided the theoretical integration that would aid the development of more coherent bodies of research aimed at understanding how individuals in organizations become and continue to be effective cooperators. Specifically, questions relate to the dynamics of how expectations and communication behaviors are translated into effective problem solving.

Second, relatively few studies have looked at partnerships from the perspective of the matched buyer–supplier dyads (Ellram, 1991; Ellram & Hendrick, 1995). This is an important issue, because within each organization, individuals within multiple business functions interact to solve problems. Those studies that have explored both sides of the partnership have typically done so from the single perspective of purchasing (representing the buyer) and sales/marketing (representing the supplier). Few studies have looked at partnerships from the perspective of
functions (other than purchasing and sales/marketing) that interact in the typical course of exchanges between buyers and suppliers—for example, engineering, quality control, and customer service. This study addresses the gap in the current literature by using a multicase study design to explore buyer–supplier interactions from cross-functional perspectives within both partnering organizations, which, in turn, provides dyadic “grounding” for the conceptual integration.

In reviewing the literature, three prominent construct domains emerged. The first relates to relationship expectations (also conceptualized as relationship mindset, understanding, or requirements). The second relates to aspects of communication (conceptualized as frequency, information flow, quality, skill-set–specific behaviors). The third relates to problem solving (also viewed as coordination of activities, conflict management/resolution, and operational integration).

Based on the identified significance of relationship expectations, communication, and problem solving in the business relationship literature, the following framework is proposed. In the large view, the framework extends prior work in the area by explicitly proposing relationships among constructs that, to the authors’ knowledge, have not been previously explored in the business literature.

Figure 1 presents a conceptual framework that integrates three significant conceptual domains that help explain buyer–seller relationships. The perspective depicts the influence of cooperative norms working through specific communication behaviors to influence problem-solving efficacy.

Cooperative norms capture the first theme identified in the literature that represents an awareness of and willingness to address important relationship issues. As such, cooperative norms provide the motivation and ability to engage in subsequent positive relationship exchanges that are required to effectively deal with the inevitable tensions and conflict that all relationships encounter in order to move the relationship forward. This theme was characterized by concepts such as relationship expectations, mindset, understanding, and requirements (Bantham et al., 2003; Christopher & Juttner, 2000; Leuthesser, 1997; Ohmae, 1989). The use of cooperative norms is also consistent with the view of Axelrod (1986), who argued that norms are a powerful mechanism to regulate conflict. Further, Cannon, Achrol, and Gundlach (2000) found that cooperative norms affect adaptations to dynamic market conditions.

Figure 1. Communication behaviors as mediators of cooperative norms and problem solving efficacy.
As noted above, there is a considerable literature stream that identifies communication as important for buyer–seller relationship management. However, several aspects of communication have been identified (i.e., frequency, information flow, quality, specific behaviors) (Assael, 1969; Bantham et al., 2003; Helper, 1991, 1994; Mohr & Spekman, 1994). The model developed in this article adopts the conceptual work of Bantham et al. (2003) because this conceptualization extends work in the area by focusing on specific behaviors that help to operationalize communication quality/efficacy beyond frequency and information exchange dimensions. Note that although explorations of frequency and information flow aspects of communication have contributed insights to understanding individual-level relationships, it is clear that these are weaker proxy constructs for communication quality. Thus, the model proposes that the influence of cooperative norms works through four communication behaviors proposed in previous interpersonal relationship literature (Bussod & Jacobson, 1983; Fowers, 1998) including:

• **Nondefensive listening:** This is a critical relationship skill in that it involves focusing attention on what the other person is saying and attempting to really understand their view. It requires significant self-restraint in that one must suppress the tendency to interrupt or dispute the other’s perceptions. Without this communication behavior, mutual understanding is severely limited.

• **Active listening:** This form of listening is more active in contrast to nondefensive listening in that attention and interest are explicitly conveyed to the partner. With this skill, “encouragers,” such as eye contact, nodding, and verbal prompts, are used to demonstrate listening and facilitate further communication. Further, with active listening, the listener accurately summarizes what the partner has said, and in this way validates a partner’s viewpoint.

• **Self-disclosure:** An open, honest sharing of information is a foundation of deeper relationships. It is through disclosure that significant relationship needs and expectations can be surfaced. Unilateral disclosure requires elements of courage and trust in that revealing important aspects of oneself leaves one vulnerable to opportunistic behavior by the partner.

• **Editing:** Like nondefensive listening, this skill requires self-restraint. However, self-restraint is now oriented to what is communicated and how it is communicated, as opposed to listening behavior. With this communication skill, an emphasis is placed on courtesy and politeness. In this way, communication is actively managed to selectively minimize negative exchanges (e.g., expressing negative emotions and blaming), as these interactions tend to adversely effect the relationship.
Last, problem-solving efficacy is a construct to capture the third theme identified in the literature that represents perceived confidence in the ability to coordinate activities in addressing problems. The social cognition literature has long noted the importance of efficacy perceptions across a range of performance domains (Bandura, 1997). Efficacy perceptions are distinct from norms in that norms are related to the awareness and willingness to address important relationship issues. Efficacy perceptions, in the context of the present framework, relate to confidence in problem-solving skills and abilities that are needed to address important relationship objectives. Thus, a relationship partner might possess awareness of and a willingness to address some key relationship issues, yet may not be confident in their own or the partner's abilities to effectively problem solve in areas related to the issues. The problem-solving efficacy construct is an important outcome variable that is affected by cooperative norms expressed through communication behaviors. Recall that this issue has been conceived in the literature as the coordination of activities, conflict management/resolution, operational integration, and problem solving (Assael, 1969; Bantham et al., 2003; Claycomb & Frankwick, 2004; Helper, 1991, 1994). In addition, Bantham et al. (2003) conceive of problem solving as central to effective relationships.

Of interest from the perspective of the present research is that the Bantham et al. (2003) framework offers potential relationships among the identified constructs. They suggest that a relational mindset (i.e., willingness to cooperate) will, at least partially, work through the expression of a skill-set enabler (i.e., specific communication behaviors) to influence problem solving. By extension, this model proposes that the influence of cooperative norms works through specific communication behaviors to influence problem-solving efficacy.

This research used a two-phase methodology to explore proposed constructs and relationships. Study 1 employed a qualitative methodology to explore the viability of the identified constructs and relationships. Study 2 used a quantitative methodology to more formally test identified relationships.

**STUDY 1**

**Method**

Study 1 employs a qualitative research methodology as described by Eisenhardt (1989), Miles and Huberman (1994), and Yin (1994). This methodology focuses on developing a deep understanding of the dynamics present within settings. The primary unit of analysis is the partnership, focusing on the individual participants’ perceptions of the relationship.
Subjects and Procedure

This study investigated five partnerships in the manufacturing sector. Specifically, the project addressed the relationship between metal processing firms and their customers. Companies ranged in size from approximately 50 employees to several thousand employees.

Personal interviews were conducted with multiple individuals within each firm of the partnering dyad, including marketing, sales, purchasing, engineering, manufacturing, and quality control. Thus, responses from both sides of the relationship dyad are represented in Study 1. The participants were selected after a member of the research team and a primary contact at supplier firms discussed the project and decided on the appropriate interview participants based on their involvement in the relationship. Most of the initial interviews were conducted onsite at the participants’ firms. Follow-up interviews were conducted on site or via telephone.

Participants were not explicitly cued in terms of the framework under investigation. The interview typically began with the researcher asking the participant to describe the relationship. Further questioning related to the genesis of relationship problems, their resolution, resources that each firm contributes to the partnership, positives and negatives of the relationship, and comparisons of the partnership with less successful relationships. In total, 26 informants were interviewed for Study 1.

Interviews typically lasted 30 minutes. Interviews were audiotaped and later transcribed; notes were also taken. The data gathered from the transcriptions of the interviews were used to create a case-study database that was reviewed in light of the framework proposed above. Researchers independently reviewed and coded passages of text as to their representativeness of framework constructs. Researchers then compared coded passages for agreement. Instances of disagreement were resolved through subsequent review and discussion.

RESULTS

Cooperative Norms

The interview data suggest that the cooperative norm construct, defined as a willingness to make cooperative changes and balance benefits and burdens in a relationship, is prominently represented in working relationships between individuals from various functional areas across organizations. The following quotes are meant to serve as exemplars of the different ways that cooperative norms manifested themselves in the interview data. The participant’s job title and organizational affiliation precede each quotation. Both the first and second quotes provide positive examples of cooperative norms. They refer to a demonstrated concern
and willingness to work with the partnering firm. The third quote provides a negative example of cooperative norms. This quote further suggests that the heavy-handed action by the customer firm negatively affected subsequent communication behaviors.

**Commodity Manager, Customer Firm No. 3:**

I can sum up in saying that they have been very cooperative with us in some tough business times. They understand our side as we have tried to understand their side. They have worked with us very well.

**Quality Engineer, Supplier Firm No. 1:**

It is just no question that they are going to work with us, whether it is a problem, or getting something qualified, or anything they need from us, or we need from them. They are, like it has always been, quite a partner, much more so than other companies. It seems to be a real focal point with them.

**Operations Manager, Supplier Firm No. 2:**

My view is they went out to everybody and basically put a gun to their head, put the bullet in the chamber, and pulled the hammer back. That was so out of character of how they had operated in the past, and they didn’t do a very good job explaining what they were trying to do and how the program would work. So those pathetic explanations didn’t end up coming until everybody was extremely upset and all sorts of communications going back and forth between the two companies, none of which were all that positive.

**Communication Behaviors**

Interview data provided numerous examples of communication behaviors that were represented in responses from individuals across functions and organizations that are consistent with those in the proposed framework. Below are a few examples, in the words of informants, that illustrate these concepts. Again, the participant’s job title and organizational affiliation precede each quotation.

**Nondefensive Listening**

Nondefensive listening involves focusing attention on what the other person is saying and really attempting to understand their view, even if their view is appreciably different. The following quotes provide positive examples of nondefensive listening. The first quote additionally suggests the relationship between this communication behavior and subsequent problem solving.
Quality Manager, Supplier Firm No. 3:

I think we need to listen; we need to have good listeners. Once we truly understand what’s going on, then we need to go in that direction and deal with what we are hearing. We need to be very open to self-criticism. Say we have a problem; this is our problem and not theirs. We have to deal with our problems in a mature way. Whatever our problem is, we have to deal with it. And then we can go and work with them and build relationships.

Quality Manager, Supplier Firm No. 3:

I have to be more flexible. I have to try to refocus my sights, take a different approach knowing that there’s going to be some threats, some positions that have been thrown out hard and fast. I have to make sure that if I am going to negotiate with them that I am coming back with a focus on the issue and a realistic approach and sell it in an appropriate way, not drawing another line in the sand of take it or else.

Active Listening

Interview data did not provide specific references to active listening “encouragers” such as eye contact, nodding, or verbal prompts used to demonstrate listening. It did, however, provide evidence of where attention and interest had been explicitly conveyed to the partner. The following quotes provide positive examples of where a partnering firm’s behavior indicates that they were attentive and interested in their partner’s communication. The second quote further suggests the relationship between active listening and problem-solving efficacy.

Project Manager, Supplier Firm No. 3:

Their engineers have been very cooperative. They are willing to listen to our concerns and issues and take them back to their group and discuss those issues. Whereas with other customers, it is kind of like hardball, you make the part so you do everything. At (Company Name), they listen. I have worked with their engineers and they listen to what you can or cannot do. They understand your problems.

Quality Engineer, Supplier Firm No. 1:

Probably (Company Name) is a little bit more reasonable. They will listen to you, especially if we have a problem with a specific dimension or something like that. They will change things a little bit to make it easier for us to make. They will work with you. We have one particular customer that will not work with us, and it causes a lot of problems because it is very frustrating.
Self-Disclosure

Self-disclosure is the open, honest sharing of information relevant to the relationship. The first quote refers to the open sharing of cost information that could leave the supplier vulnerable to opportunistic behavior by the customer. The second quote refers to the clarity of expectations that self-disclosure can facilitate.

**Commodity Manager, Customer Firm No. 3:**

I think (Company Name) has brought a spirit of partnership, which is a much overused word in today’s world, but they have been very open with us relative to sharing their costs we that we can arrive at a mutually acceptable price on the parts they are selling to us.

**Quality Engineer, Supplier Firm No. 1:**

One thing that is easy about working with them is that they let you know right up front exactly what they expect and what they need. You don’t have any problems calling them if we think something is not right or if we have any questions. There is not much left open for interpretation. They get right down to the black and white, and let us know what is expected of us.

The following negative example of self-disclosure suggests that the lack of self-disclosure can have a negative influence on problem solving.

**Supplier Manager, Customer Firm No. 1:**

We send them purchase orders with weekly requirements and there are times when we don’t hear from them and then the week that they are due it’s, “Oh, we had issues. Oh, we had this or that.” Let us know up front that you have the issues and we can work with you; but don’t wait until after your delivery due date and say, “Oh, by the way, we’ve had this problem, we’ve had that problem.”

Editing

This communication behavior requires an emphasis on courtesy and politeness. Its use can minimize the escalation of negative exchanges. The interview data provided negative examples of editing, or more precisely, examples of when editing was absent from an exchange. The first quote is self-reflective in nature, and the second references a customer’s lack of editing.

**Quality Manager, Supplier Firm No. 3:**

We are not perfect. From where I sit, I see us behaving sometimes in similar kind. I think we as a company generally try to bargain in good
faith, trying to establish a win–win situation, which is good for everybody. Sometimes we get a little negative emotion in there that escalates into an inappropriate position, but we generally do a very good job.

**Quality Manager, Supplier Firm No. 3:**

Particularly at (Company Name), you know that somebody is going to be threatening right away. If there is a problem the threats start first thing.

**Problem-Solving Efficacy**

The review identified multiple examples of problem-solving efficacy, that is, the perceived confidence in the ability to coordinate activities in addressing problems. The following quotes provide examples. The first quote is a positive exemplar of the construct. The second and third quotes contrast both positive and negative examples of problem-solving efficacy. All three quotes further suggest the relationship between communication behavior and problem-solving efficacy.

**Director of Purchasing, Customer Firm No. 3:**

They jumped through hoops to get our product done and approved and continue to supply from that product on. They have tried to understand our needs and we have tried to understand theirs. They have worked with us for a long time and they have been very responsive and worked through their issues with us. They have given us the criteria that we are looking for—the cost, quality, technology, delivery, administration, and attitude to move forward with more business.

**Customer Service Specialist, Supplier Firm No. 3:**

I have a particular problem customer that is just, I mean, we know his tolerances for his parts are so tight that it is almost impossible for us. I don’t think we will ever please him. In fact, I was on the phone with him last night and again this morning. But with (Company Name), we have never had those issues. I mean they would always say, “Tell us what you can do.” They will work with you. But this particular gentleman will not work with anyone. This particular gentleman has blinders on; black is black and white is white; there is no gray area in between.

**Quality Engineer, Supplier Firm No. 3:**

We have trouble correlating different measurements with one of our customers. Usually it is just one measurement and their paperwork always comes with a form that implies we are wrong—fix it. This has been going on for months and months. It is just a correlation thing. One of us is doing something different, but they don’t seem to want to get to the bottom of it and figure out what is different. Whereas with (Company Name), when we were having a similar problem, they spent hours on the phone.
with me, e-mailing back and forth, trying to figure out what we were doing differently and how we could get so we were doing it the same. It was never, “You are wrong and we are right.” It was, “What are we doing differently from each other.”

In sum, informant responses representing dyadic exchanges across functions and organizations provide qualitative support for the viability of the identified constructs as well as, to a limited degree, relationships that were identified in the literature. Findings of Study 1 suggest the appropriateness of further empirical exploration of the proposed relationships. Study 2 formally tests these proposed relationships.

STUDY 2

The following are hypotheses based on Figure 1 that suggests the influence of cooperative norms on problem-solving efficacy will be mediated by specific communication behaviors. It is posited that:

- **H1:** Nondefensive listening will mediate the relationship between cooperative norms and perceived problem-solving efficacy.

- **H2:** Active listening will mediate the relationship between cooperative norms and perceived problem-solving efficacy.

- **H3:** Disclosure will mediate the relationship between cooperative norms and perceived problem-solving efficacy.

- **H4:** Editing will mediate the relationship between cooperative norms and perceived problem-solving efficacy.

It is expected that cooperative norms will be positively related to the use of specific communication behaviors, which, in turn, will be positively related to perceived problem-solving efficacy.

Method

**Sample.** Study 2 consisted of a sample of metal part producers from three separate metal-forming technologies: powder metallurgy, casting, and heat treating. Although distinct, these technologies are metal-forming industries that are in the mid-point of the supply chain and deal with a common set of competitive problems and customer management. Thus, responses from the supplier or seller side of the relationship dyad are represented in Study 2. Three different industry lists comprised the sampling frame. Using these lists, suppliers or firms that engage in specialized markets were eliminated. A total of 247 firms remained. At each firm, an individual was identified who was centrally engaged in an ongoing customer relationship.
**Procedure.** Following the Dillman Total Design Method (1978), a preliminary letter was sent to each potential respondent outlining the project, explaining its importance to them, and the importance of their participation. One week later, each individual received a cover letter, survey, and a postage-paid return envelope. Individuals were promised a summary of results if they participated in the study. One week later a reminder postcard was sent, and a follow-up survey package was sent to each nonrespondent three weeks later. Data collection was terminated after another four weeks. The overall response rate was 36.4%.

**Questionnaire.** Measures were based on literature reviews and knowledge of metal part producer industries. Industry representatives not included in the study reviewed an initial draft of the questionnaire. The final questionnaire included measures of managerial perceptions of cooperative norms, use of communication behaviors, problem-solving efficacy, and demographic descriptors.

**Measures.** The context for questionnaire administration was a significant customer relationship that had been ongoing for at least the past year in which the respondent had recently experienced conflict. Given the dyadic nature of relationships, respondent perceptions for all measures included: (a) views of their own (the supplier's side) personnel and (b) views of their customer’s (the buyer's side) personnel. Measures were then summed and averaged representing combined company and customer perceptions. The cooperative norms construct was assessed via a total of ten 7-point items (strongly disagree/strongly agree) relating to the respondent’s view of their company’s as well as their customer’s personnel with respect to concern for partner profitability, willingness to make cooperative changes, view of problems as joint responsibility, view of the need to work together with the partner, and not minding owing the partner favors (adapted from Cannon et al., 2000).

Communication behaviors were measured with 7-point items (rarely/frequently) relating to the respondent’s perception of their company’s as well as their customer’s personnel. These included:

- **Nondefensive listening** (6 items): paying attention to what the partner is saying, appearing to understand the partner, not interrupting the partner.
- **Active listening** (6 items): using eye contact when listening, accurately summarizing partner viewpoint, actively acknowledging understanding of the other perspective.

---

In measurement development pretesting, a series of pairwise confirmatory factor analyses was conducted to assess discriminant validity of the measures with the use of chi-square difference tests. For each pair of measures, the chi-square difference tests produced a significant result. Therefore, trying to force measures of different constructs into a single underlying factor led to a significant deterioration of model fit in comparison to the two-factor model. These results provide support for the discriminant validity of the measures (Anderson & Gerbing, 1988).
• **Disclosure** (10 items): sharing honest thoughts and feelings, open sharing of ideas and information, direct communication of point of view, specifying requirements and needs, and identifying specific ways the other side can change to improve relationship.

• **Lack of editing** (8 items): interacting politely (reverse coded), engaging in fewer positive than negative exchanges, focusing on more negative than positive behaviors, and overreacting to negative events.

The measure of **problem-solving efficacy** consisted of four 7-point items *(not at all confident/extremely confident)* assessing a respondent’s confidence in their company’s as well as their customer’s ability to engage in joint problem solving in productively resolving conflict and to resolve conflict effectively through cooperative problem solving.

**Results**

Cronbach’s coefficient alpha was used to assess the internal consistency of multiple-item measures used in the study. Alpha measures ranged from .74 to .92 and compare favorably with reliabilities reported in related research. Table 1 reports descriptive statistics and correlations for the constructs used in this study.

**Regression Analyses.** In order to test whether communication behaviors mediate the effect of cooperative norms on problem-solving efficacy, three conditions must be met.

1. Norms should have a significant effect on the communication behaviors.
2. Norms should also have a significant effect on problem-solving efficacy.
3. As compared to Condition 2, the impact of norms on problem-solving efficacy should significantly diminish when a communication

| Table 1. Descriptive Statistics and Correlations for Cooperative Norms, Communication Behaviors, and Problem-Solving Efficacy. |
|---|---|---|---|---|---|---|---|
| | Mean | Standard Deviation | X1 | X2 | X3 | X4 | X5 | X6 |
| X1 Cooperative norms | 4.65 | 0.89 | — | — | — | — | — | — |
| X2 Nondefensive listening | 4.87 | 1.01 | .34** | — | — | — | — | — |
| X3 Active listening | 4.86 | 0.95 | .40** | .57** | — | — | — | — |
| X4 Disclosure | 5.07 | 0.78 | .57** | .58** | .63** | — | — | — |
| X5 Editing | 4.59 | 1.02 | .49** | .44** | .53** | .50** | — | — |
| X6 Problem-solving efficacy | 4.66 | 1.19 | .22* | .32** | .26* | .36** | .17 | — |

*Correlation is significant at the .05 level.
** Correlation is significant at the .01 level.

N = 92.
behavior is included in a regression model with norms predicting problem-solving efficacy (Baron & Kenny, 1986).

The above conditions were examined separately for the four communication behaviors with ordinary least-squares regression with the use of the Baron and Kenny criteria and are reported in Table 2. Thus, a communication behavior is regressed against cooperative norms (Condition 1). Next, problem-solving efficacy is regressed against cooperative norms (Condition 2). Last, problem-solving efficacy is regressed against cooperative norms and a communication behavior (Condition 3). Note that Table 2 includes the standardized coefficients, model $R^2$ and $F$ value for each tested relationship.

With respect to $H_1$, cooperative norms had a significant effect on nondefensive listening; thus Condition 1 is met. As anticipated, norms had a significant effect on problem-solving efficacy; thus Condition 2 is met. Further, the influence of norms was diminished when nondefensive listening was included in the regression model predicting problem-solving.

**Table 2. Regression Analyses Testing Mediating Effect of Communication Behaviors on Cooperative Norms and Problem-Solving Efficacy.**

<table>
<thead>
<tr>
<th>Communication Behavior</th>
<th>Model Results</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R^2$</td>
<td>$F$ value</td>
</tr>
<tr>
<td><strong>Nondefensive listening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nondefensive listening = (.34*) Coop. norms</td>
<td>.12</td>
<td>11.87*</td>
</tr>
<tr>
<td>Problem-solving efficacy = (.22*) Coop. norms</td>
<td>.05</td>
<td>4.68*</td>
</tr>
<tr>
<td>Problem-solving efficacy = (.12) Coop. norms + (.28*) Nondefensive listening</td>
<td>.12</td>
<td>5.78*</td>
</tr>
<tr>
<td><strong>Active listening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adaptive listening = (.40*) Coop. norms</td>
<td>.16</td>
<td>16.72*</td>
</tr>
<tr>
<td>Problem-solving efficacy = (.22*) Coop. norms</td>
<td>.05</td>
<td>4.68*</td>
</tr>
<tr>
<td>Problem-solving efficacy = (.14) Coop. norms + (.22*) Adaptive listening</td>
<td>.09</td>
<td>4.31*</td>
</tr>
<tr>
<td><strong>Disclosure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disclosure = (.57*) Coop. norms</td>
<td>.32</td>
<td>41.29*</td>
</tr>
<tr>
<td>Problem-solving efficacy = (.22*) Coop. norms</td>
<td>.05</td>
<td>4.68*</td>
</tr>
<tr>
<td>Problem-solving efficacy = (.00) Coop. norms + (.37*) Disclosure</td>
<td>.14</td>
<td>6.85*</td>
</tr>
<tr>
<td><strong>Editing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Editing = (.54*) Coop. norms</td>
<td>.29</td>
<td>27.77*</td>
</tr>
<tr>
<td>Problem-solving efficacy = (.22*) Coop. norms</td>
<td>.05</td>
<td>4.68*</td>
</tr>
<tr>
<td>Problem-solving efficacy = (.27) Coop. norms + (.03) Editing</td>
<td>.08</td>
<td>2.94</td>
</tr>
</tbody>
</table>

*Note: Standardized coefficients appear in parentheses. $^*p < .05$ in all instances except adaptive listening coefficient where $p < .054$. 
efficacy, meeting Condition 3 (with the standardized coefficient for cooperative norms dropping from .22 to .12).

Regarding $H_2$, cooperative norms had a significant effect on adaptive listening; thus Condition 1 is met. As noted before, norms had a significant effect on self-efficacy; thus Condition 2 is met. Further, the influence of norms was diminished when active listening was included in the regression model predicting problem-solving efficacy, meeting Condition 3 (with the standardized coefficient for cooperative norms dropping from .22 to .14).

Findings with respect to $H_3$ and $H_4$ followed similar patterns, with cooperative norms having significant effects on disclosure and editing, respectively, and problem-solving efficacy (Conditions 1 and 2). However, for Condition 3, the influence of norms was diminished for disclosure (with the standardized coefficient for cooperative norms dropping from .22 to .00) and not for editing (i.e., a lack of). Note that directional relationships between variables were as expected, with cooperative norms positively related to nondefensive and adaptive listening, disclosure, and problem-solving efficacy and negatively related to a lack of editing. As anticipated all of the communication behaviors except a lack of editing were positively related to problem-solving efficacy.

In summary, consistent with three of four predictions, communication behaviors were found to mediate relationships between cooperative norms and problem-solving efficacy. Contrary to expectations the editing behavior was not found to mediate the relationship between norms and problem-solving efficacy.

DISCUSSION AND IMPLICATIONS

The purpose of this project was to develop and test a model relating individual cooperative norms and communication behavior to relationship quality measured by problem-solving efficacy. This work has both conceptual and practical implications. As Narayandas and Rangan (2004) noted, much of the previous literature did not distinguish between interpersonal and interorganizational effects. From a theoretical perspective, understanding the link between individual behavior and interfirm cooperation fills a significant gap in the literature. Larson (1992) suggested that social control factors will give a more complete account of the development of organizational networks than economic analyses alone. Ellram and Hendrick (1995) found that both buyers and sellers desired improved communication. This research was designed to add to the emerging body of knowledge about “softer” issues in the development of effective interorganizational relationships.

In terms of practical applications, this study identified potential antecedents to effective cooperation that are tractable and can be developed within organizations that regard cooperation as essential to their
strategy. Given the current competitive environment, with pressures for the development of global capabilities and product development processes that often require the convergence of different capabilities from many firms, understanding “softer” issues will be a growing necessity among many firms.

Theoretical Implications

Mohr and Spekman (1994) demonstrated that communication quality is associated with the degree of partnership success. That result is important because it links individual behavior (communication) with organizational outcomes. Certainly, their research was a significant contribution in identifying relationships among individual behaviors and organizational outcomes. However, their measures of communication quality focused more on the characteristics of the information (e.g., completeness, timeliness) than on the nature of individual interactions. Similar to Leuthesser (1997), these studies found a significant relationship between disclosure and relationship quality (measured by problem-solving efficacy). However, this article extended his work by identifying two more communication behaviors related to relationship quality—nondefensive and active listening.

The impact of individual interactions is underscored by Narayandas and Rangan (2004), who found that trust between individuals in buyer–seller relationships yields commitment between the firms. This research dealt with firms similar to Narayandas and Rangan (buyer–seller relationships among commodity suppliers). Although the final dependent measure (problem-solving efficacy) is not a precise surrogate for trust, confidence in developing joint solutions is very likely to correlate with the Moorman, Zaltman, and Deshpande (1992) definition of trust—“a willingness to rely on an exchange partner in whom one has confidence” (p. 315). This connection has significant implications as trust is implicated in the links between cooperative norms, communication, and relationship quality. Connecting these results with downstream outcomes such as interorganizational commitment and investments may add new insights regarding relationships among these variables.

These results are also consistent with Anderson and Narus (1990), who found that communication was positively related to cooperation from the perception of both the manufacturer and distributors. Although the dyads in the Anderson and Narus study differ from this sample, channel problems are certainly similar to commodity relations in the supply chain. Moreover, like Mohr and Spekman (1994), the measures of communication center on issues of communication sufficiency and timeliness. Although these measures are certainly valuable, this research provides measures of interpersonal behavior that extend the breadth of the communication construct.

To aid construct integration, field interviews were employed as a check on the relevance and significance of constructs identified in the
literature. To this end, qualitative research methodology incorporating matched buyer–supplier dyads was used as a means of exploring both sides of the partnership, incorporating multiple functions, including top management, sales, purchasing, engineering, quality control, and customer service.

These findings imply that to understand how conflict resolution gets translated into subsequent relationship satisfaction, investments, and commitment, one must understand the antecedent process of how cooperative norms work through specific communication behaviors. Without communication behaviors facilitating efficacious problem solving, the likelihood of satisfaction, future investments, and longer-term commitment in the buyer–seller relationship are reduced.

Recall that although editing, more specifically a lack of editing, was found to be represented in the qualitative exemplars, it was the one communication behavior that was not found to at least partially mediate the effect of cooperative norms on problem-solving efficacy. Of the communication behaviors, editing involves emotion—trying to limit the potentially adverse effects of negative emotion. Although appearing to possess face validity, perhaps the items used to capture this aspect of communication in Study 2 do not adequately account for its influence. Or, alternatively, perhaps the emotional content associated with this aspect of communication causes editing to work differently or affect different variables in the relational process.

**Future Research Implications**

The present study contributes to research in the area in multiple ways. For example, exploration of the role of other communication behaviors could prove fruitful. Further, how might attributional processes related to prior problem-solving episodes and associated outcomes affect cooperative norms and communication behaviors?

Future quantitative research might also explore proposed relationships for both sides of the relationship dyad. Study 2 of this research explored perceptions from the supplier/seller side of the dyad only. However, informant responses from Study 1 representing both buyer and seller dyadic exchanges provide qualitative support for the significance and relevance of constructs as well as, to a limited degree, proposed relationships.

Given that the present research explored mediation for cross-sectional data, longitudinal quantitative explorations appear particularly warranted. This is consistent with Bejou (1997), who suggested that multi-stage buyer–seller models are especially important in developing the field. Specifically, examining the process whereby outcomes associated with one problem-solving and conflict-resolution episode effect subsequent communication and problem-solving exchanges would be a valuable contribution to the literature. In addition, the role of cooperative
norms, communication behaviors, and problem-solving efficacy in relationship satisfaction and investments begs exploration.

Future research in this area may also develop a contingency model comparing the generalizability of the present findings depending on the level of customer and seller power. This research focused on selling firms in which the sales team dealt with a powerful customer. Might relationships among norms, communication behaviors, and problem-solving efficacy differ in settings in which the seller is more powerful?

**Managerial Implications**

From a practitioner standpoint, the present research has important implications. First, the significance of perspective taking cannot be overemphasized as a means of addressing relational conflict. This observation was highlighted over and over by multiple informants in the field interviews and is further reinforced by the significant influence of cooperative norms in the regression equations.

Of significance is the finding that cooperative norms work through communication behaviors to influence perceived problem-solving efficacy. Thus, even with the adoption of a partnering mindset, the achievement of truly efficacious problem solving will prove elusive without the complementing skill set—communication behaviors. Thus, training that reinforces skills relating to active and nondefensive listening and disclosure provides specific tools that are critical for dealing with the continuous conflict encountered in various stages of interorganizational relationships. Informant responses unequivocally indicated than even when partners were willing to cooperate to address a problem, it is the way they communicate about the problem, more so than the amount of communication, that can either facilitate or denigrate problem-solving efficacy.

In conclusion, understanding buyer–seller relationships will continue to be a significant topic within the marketing literature. The authors hope that this examination of relationships among cooperative norms, communication behaviors, and problem-solving efficacy will contribute to further efforts aimed at increasing understanding of the dynamics of individual-level working relationships between organizations.

**REFERENCES**


This research was funded by the Alfred P. Sloan Foundation and the Metal Processing Institute at WPI.

Correspondence regarding this article should be sent to: Chickery J. Kasouf, Department of Management, Worcester Polytechnic Institute, Worcester, MA 01609 (chick@wpi.edu).