THE CONSEQUENCES AND BOUNDARIES OF INCOHERENCE
IN BUYER-SUPPLIER RELATIONSHIPS*

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In this research, we consider a novel mechanism that contributes to interorganizational exchange demise: \textit{incoherence} in a firm’s behaviors as perceived by a focal firm. In particular, we focus on the incoherence that reflects the difference between the generalized expectations of opportunistic behavior and observed opportunistic behavior of a partner, where the expectation of opportunism comes from a combination of the focal firm's belief of how opportunism is generally related to goal congruence in the marketplace (based on prior market experiences) and its current perception of goal congruence within the dyad. We propose that such behavioral incoherence undermines the focal firm’s overall evaluation of its partner’s performance and own relationship intentions and expectations. Using 492 longitudinal, confidential reports of industrial buyers and sellers, we investigate how incoherence strikes at the heart of an exchange relationship and show that its impact is about twice that of the partner’s opportunistic behavior. Moreover, we observe this undermining effect even for \textit{positive} incoherence – i.e., opportunistic behavior that is better than generalized expectations. Finally, we find that the dysfunctional consequences of incoherence are mitigated through structural factors such as the focal firm’s dependence on its partner, the development phase of the relationship, and the presence of bilateral idiosyncratic investments. We develop implications for theory and the management of interorganizational relationships.

Keywords: interorganizational relationship management and performance, incoherence, buyer-seller relationships, opportunism, dependence, relationship phase, bilateral investments.
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*The present is the reflection of the past, and the future will be the echo of the present; this saying will always prove true.*
-- *Hazrat Inayat Khan*, Mastery Through Accomplishment 1978

**INTRODUCTION**

In recent years, there has been a growing interest in the “dark side” of close interorganizational relationships (Anderson and Jap 2005, Grayson and Ambler 1999), or more generally, how relationships between buyers and sellers break down and dissolve. Some studies peg the failure rate of such relationships to be anywhere from 30-50% (Beamish 1985, Killing 1988, Kogut 1997, Stuckey 1983). As a result, a number of explanatory mechanisms for relationship demise have been advanced from multiple disciplines. Psychologists suggest that the parties are more likely to raise annoying issues and generate conflicts in close relationships as the relationship progresses (Ephross and Vassil 1993). Marketers suggest that dissatisfaction grows as the relationship persists because the parties gradually lose objectivity and their expectations towards the relationship grow high (Grayson and Ambler 1999, Moorman et al. 1992). Management researchers suggest that the relationship becomes unstable as the parties learn about each other’s competencies and information becomes symmetrical across the dyad (Inkpen and Beamish 1997). Economists point to increased opportunism as a key source of exchange instability (Klein 1996, Williamson 1996). Each of these explanations suggests that the behavior of one or both partners as the relationship progresses results in dissatisfactory outcomes over time. Moreover, firms tend to have inaccurate perceptions of their partners’ behaviors and the relationship (Vosgerau et al 2008) and such perceptual inaccuracies, which may also be asymmetric across partners (Ross et al. 1997), can be detrimental to the relationship.

In this research, we propose that a focal firm filters and interprets the behavior of its partner through the lens of its general beliefs about exchange relationships in the marketplace,
and that this lens of marketplace beliefs is an important conduit of relationship problems that can then blur the future of the exchange. Specifically, we propose that (i) a focal firm has a general belief, developed from prior market experience of how goal congruence inhibits opportunistic behavior among partners in an exchange relationship, (ii) the firm uses those beliefs to construct expectations of a specific partner’s opportunistic behavior, and (iii) any deviation (good or bad) from those expectations on the part of the partner – what we term as “behavioral incoherence” – has an undermining effect on relationship outcomes. Using nearly 500 confidential reports from organizational respondents, we demonstrate that the damaging impact of incoherence on relationship performance outcomes is nearly twice that of the negative impact of the partner’s opportunistic behavior itself.

We also highlight three organizational boundary conditions of these undermining effects in exchange relationships. Specifically, we show that the dysfunctional effect of incoherence is *mitigated* when (i) the focal firm is dependent on the partner, (ii) the dyad has made mutual commitments to idiosyncratic investments, or (iii) the relationship is in an early stage of development. We provide theoretical explanations for these effects and empirically test their impact on two critical interorganizational outcomes: the focal firm’s evaluation of its partner’s overall performance in the relationship and its future relationship intentions and expectations. Thus, we shed insight into a fundamental explanation for relationship demise and highlight some boundary conditions for this effect.

In doing so, we build upon and extend several research streams. First, we introduce and explore the role of interorganizational *expectations* in buyer-supplier relationships, as opposed to mere perceptions (Anderson and Weitz 1992, Ross et al. 1997, Vosgereau et al. 2008) or past behavior (Jap and Anderson 2007). We investigate and estimate latent belief structures which
underlie expectations and impact on interorganizational exchange outcomes. Second, we advance a more complex view of an individual firm’s expectation that goes beyond a univariate distribution (c.f., Rust et al. 1999) to a structural specification (as indexed by a specific slope and intercept). Third, we draw upon literatures in product incoherence and cognitive evaluation processes to highlight a fundamental mechanism of interorganizational exchange, in particular the processes that contribute to dissolution. The process of breaking down relationships is fundamentally different from buildup. Buildup requires two participants jointly striving for mutual gain, but breakup requires only one participant to kill the relationship. Buildup is typically highly visible and positive, while breakup can be secretive and bitter. Thus, this research stands in stark contrast to the historical direction of the literature, which has tended to focus on the “sunny” side of exchange such as trust and commitment (Anderson and Weitz 1992, Ganesan 1994, Morgan and Hunt 1994) and synergistic outcomes (Anderson and Narus 1990, Jap 1999).

The paper is structured as follows. In the next section, we introduce the notion of behavioral incoherence following the descriptions of two critical performance variables (i.e., overall evaluation of the partner’s performance and the focal firm’s own relationship intentions and expectations). We formulate hypotheses for the main effects of behavioral incoherence on performance and the boundary conditions for these effects. This is followed by a test of the hypotheses on industrial buyers and sellers in ongoing relationships. We conclude with a discussion of results, limitations and implications for management and future research.

**CONCEPTUALIZATION**

An overview of our conceptualization is shown in Figure 1, where we delineate how behavioral incoherence is formulated based on a belief structure rooted in market experience as
well as present observations of partner behavior, and how selected organizational boundary conditions regulate the undermining effects of behavioral incoherence on relationship outcomes. In the sections to follow, we discuss the specific parts. Our unit of analysis is a focal firm’s view (either a buyer or a seller) of an ongoing business relationship. For generalization, we do not constrain our study to relationships that are in their beginning stages or in decline. In this section, we first review the performance outcomes of interest and then develop the notion of behavioral incoherence as a function of opportunism and goal congruence (both past and present). This is followed by a discussion of potential boundary conditions.

**PERFORMANCE OUTCOMES**

We consider two key performance outcomes: the focal firm’s overall evaluation of its partner’s performance and the focal firm’s future intentions and expectations. Both concepts have received considerable attention in the interorganizational literature. The firm’s overall evaluation of partner performance reveals “a shadow of the past,” while the focal firm’s future intentions and expectations reflect “a shadow of the future” (Poppo et al. 2008). By including both outcomes, we can examine the effect of incoherence on both how the focal firm sees the history of its relationship with its partner as well as how it sees the future of the relationship.

*Overall evaluation of partner’s performance.* Evaluation of partner performance is a summary assessment of the partner’s value in the relationship to date (Kumar et al 1992, Jap and Anderson 2003). It reflects the view of the focal firm alone, an individual, global assessment of the current balance of benefits and costs of working with a specific partner. In short, a positive evaluation of partner’s performance is needed to justify the focal firm’s involvement in the business relationship. Note that the evaluation of partner’s performance may be quite different
from the evaluation of the value that the two parties create together. The former captures the share that the other party contributes to the joint value created by the dyad.

**Future intentions and expectations.** The focal firm’s future intentions and expectations in the relationship are a critical harbinger of anticipated actions and volitions that are likely to occur (Anderson and Weitz 1989, Heide and Miner 1992, Noordewier et al 1990). While intentions speak to future actions, expectations address the strengths of the beliefs in the future. Bercovitz et al. (2006) found in an R&D context that a party’s willingness to collaborate in the future was a key predictor of actual future collaboration over time. Hence, intentions are the basis for the plans or commitment in the future (c.f., White and Schneider 2000). In contrast, expectations are beliefs “that something will happen,” or wishing with “confidence of fulfillment of something” (Oxford Dictionary 2005). They represent what firms feel their business partners should offer rather than would offer and are closely associated with the future value firms believe that the business relationship will bring about. Consistent with this, Schurr and Ozanne (1985) found that buyer expectations about trust and bargaining stance significantly affected attitudes and behavior towards current suppliers.

Absent a sense of confidence in the future of the relationship, firms may adopt a short-term orientation, refusing to engage in activities that do not pay off quickly and with certainty (Williamson 1993). In short, expectations of the relationship’s continuity together with future intentions form a fundamental building block, the basis upon which a focal firm is willing to engage in processes and investments for the long run (Anderson and Weitz 1989, Heide and Miner 1992).

Together, these performance outcomes reflect the reliance on the focal firm’s perceptions as the basis for its subsequent action. Such perceptions have been shown to have a powerful
impact on the focal firm’s behavior, the partner’s behavior, and the very state of the dyadic relationship. For example, Anderson and Weitz (1992) showed that perceptions of the other party’s signals of commitment (e.g., idiosyncratic investments) motivate the focal firm to respond in kind. Perceptions may or may not match reality and the extent to which it does can be beneficial or harmful. Ross et al. (1997) show that asymmetries in perceptions can undermine the focal firm’s assessment of its own outcomes in a relationship. Vosgerau et al. (2008) show that perceptual underestimation of a partner’s closeness to the relationship is detrimental for the relationship (as the focal partner may react in kind, in ways that undermine the relationship), while perceptual overestimation of a partner’s closeness is beneficial for exchange. Consistent with this approach, we also view a focal firm’s perceptions as an important place from which the partner, behavior, and the dyad are affected. However, we go beyond these past specifications to propose a specific belief structure, based on the focal firm’s generalized expectations of opportunism and a partner’s specific actions. We now turn to a consideration of these parts.

**BEHAVIORAL INCOHERENCE**

We define behavioral incoherence as the discrepancy between generalized expectations of partner behavior and specific observation of partner behavior. In this study, we are interested in incoherence that is associated with a partner’s opportunistic behavior. Incoherence occurs when there is a discrepancy between the generalized expectation of opportunism, which is a function of the focal firm’s belief of how opportunism is generally inhibited by goal congruence in the marketplace (derived from prior market experience) and its current perception of goal congruence within the dyad, and observed opportunistic behavior. (We specify these relationships mathematically in the following section.) Our notion of incoherence is a novel construct to the channels literature, incorporating a generalized benchmark of marketplace
behavior as a reference point for the specific relationship. This approach is consistent with current interest in moving beyond the scope of the dyad to better understand how the market context impacts interorganizational exchange performance.

The notion of incoherence originates from the product positioning literature (see Kayande et al. 2007), which examines unlikely attribute combinations and their impact on preference. The general intuition is that consumers form belief structures about how product attributes (e.g., gas mileage and power) are generally related (e.g., negatively correlated) in the marketplace. If a consumer believes powerful cars are generally gas guzzlers, how will he/she react to a “powerful and fuel efficient” car? Kayande et al. (2007) show that such unexpected combinations increase uncertainty, which undermines preferences. We extend this notion of unexpected combinations to the interorganizational context, most notably to refer to the differences between the focal firm’s expectations of behavior from a partner (based on marketplace beliefs of how opportunism is inhibited by goal congruence) and a partner’s ongoing behavior. We first define the focal constructs – opportunism and goal congruence -- and discuss how potential differences among them might undermine exchange performance.

**Opportunism.** Opportunism, or self-interest seeking with guile, is a critical undermining aspect of interorganizational exchange (Williamson 1985, 1993). Transaction cost theorists assume that all parties to an exchange are opportunistic and it is the task of each party to structure the exchange so as to minimize (albeit not entirely eliminate) opportunism. Opportunism creates maladapted transactions that are not sustainable over the long run; it limits both parties’ potential gains and can lead to redistribution of value (Wathne and Heide 2000). To this end, a considerable literature in marketing has identified a host of potential control
mechanisms for managing this threat (Brown et al. 2000, Heide et al. 2007, Jap and Anderson 2003, see Wathne and Heide 2000 for a review). Hence, we expect:

H1: Opportunism is negatively related to evaluations of partner performance and future relationship intentions and expectations

**Goal congruence.** In the marketing literature, there has been considerable work on relational or social mechanisms for the suppression of opportunism. Chief among these mechanisms is the notion of goal congruence, or the degree to which both parties perceive the possibility of achieving compatible, if not identical objectives (Eliashberg and Michie 1984, Schmidt and Kochan 1977). Agency theorists view goal congruence as central to solving labor differences and creating incentives to curb shirking and moral hazard exchange (Bergen et al. 1992). Goal congruence is also important for providing direction to the effort and activities of the dyad, particularly in the early phases of relationship development (i.e., the exploration phase) (Dwyer et al. 1987). Given the preponderance of evidence regarding the functional role of goal congruence in interorganizational exchange, we anticipate that:

H2: Goal congruence is positively related to evaluations of partner performance and future relationship intentions and expectations

**Relationship between opportunism and goal congruence.** Goal congruence and opportunism are inextricably linked in interorganizational exchange. Anderson (1988) found that goal congruence and opportunism are negatively related in that the more salespeople perceive alignment between their goals and the company’s goals, the less opportunistic they became. Jap and Anderson (2003) show that goal congruence’s safeguarding capability changes over the course of the relationship. Goal congruence, once achieved, has a tendency to fade into the background over the course of everyday activities as long as *ex post* opportunism is low (cf., Neilsen and Rao 1987). However, when opportunism increases, goal congruence rises to the
fore, typically invoked as a means by which to evaluate and understand deviations in a partner’s behavior.

Thus, we regard the focal firm’s general beliefs regarding the nature and relationship between goal congruence and opportunism as fundamental to the future direction, nature, and magnitude of efforts dedicated to the exchange both initially and over time. For focal firm $i$, we represent this relationship (hereafter called a belief structure) between opportunism ($OPPT$) and goal congruence ($GOAL$) as follows:

$$OPPT = \beta_0 + \beta_1 \cdot GOAL + \epsilon$$

(1)

where $\beta_0$ is the intercept (representing information that focal firm $i$ has about any partner’s average opportunistic behavior), $\beta_1$ is a partial regression coefficient (representing focal firm $i$’s belief about how opportunism is inhibited by goal congruence), and $\epsilon$ indicates that goal congruence and opportunism may not be perfectly correlated. For mathematical tractability, we assume that the focal party knows $\beta_1$ from past experience, $\beta_0$ is normally distributed with mean $\tau_0$, $\epsilon$ is normally distributed with mean 0, and that $\beta_0$ and $\beta_1 \cdot GOAL$ are independent. We choose a more conservative linear representation of this relationship as a starting point for our investigation, but acknowledge that future research might investigate non-linear representations.

**Expectations and behavioral incoherence.** We now propose that the focal firm $i$ forms an expectation of partner $j$’s opportunistic behavior, denoted by $E[OPPT_{ij}]$, based on the belief structure specified in Equation (1) and its current perception of the congruence of the goals of the two parties, as follows:

$$E[OPPT_{ij}] = \tau_{0i} + \beta_{li} \cdot GOAL_{ij}$$

(2)
where \( GOAL_{ij} \) is the focal firm’s mean perception of the congruence of the goals of the two parties. We note that Equation (2) follows from the assumption that \( E[\varepsilon]=0 \) and that \( \beta_{0i} \) and \( \beta_{ii} \cdot GOAL \) are independent.

Similar to Kayande et al.’s (2007) definition of product incoherence, we now define behavioral incoherence as the squared difference between expected opportunism (i.e., that which comes from beliefs about “normal” marketplace behavior) and observed opportunism:

\[
INCOHERENCE = [OPPT_{ij} - E[OPPT_{ij}]]^2
\]  

(3)

where \( OPPT_{ij} \) is focal firm \( i \)'s mean perception of partner \( j \)'s opportunism.

A summary illustration of this conceptualization of incoherence is shown below:

Incoherence can thus be viewed as a departure of the partner’s behavior from the focal firm’s generalized marketplace expectations with the difference being either positive or negative. A different but related concept termed disconfirmation of expectations is central to the literature on customer satisfaction (Oliver 1980). The general intuition is that customers use product (or service) specific expectations to create a frame of reference about which they make comparative judgments (e.g., Kumar et al. 1997). If a customer experience exceeds expectation (a positive
disconfirmation), then customer utility increases. If a customer experience falls short of expectation (a negative disconfirmation), then customer utility decreases. In 1999, Rust and his colleagues found the intriguing result that positive disconfirmation is not necessary to increase preference, which suggests that exceeding expectations may not always lead to better outcomes (Rust et al. 1999). They argue that uncertainty generally has a negative effect on preferences of risk-averse individuals and any (whether positive or negative) discrepant information (or disconfirmation) increases uncertainty.

Consistent with Rust et al. (1999)’s approach, we hypothesize that behavioral incoherence, regardless of the direction, increases uncertainty because of a conflict with the focal firm’s initial beliefs about the degree to which goal congruence and opportunism are generally correlated. Although there has been research on uncertainty due to the external environment (Achrol and Stern 1988, Klein et al 1990) or opportunistic behaviors (Williamson 1985), we are particularly interested in uncertainty that stems from the discrepancy in behaviors within the dyad and more generalized behaviors and expectations that stem from outside the dyad. In fact, discrepant information is known to increase uncertainty in a variety of scenarios (Einhorn and Hogarth 1985, Geylani et al. 2008), and such uncertainty has been identified as “the fundamental problem of cooperation” (p. 130) by Ouchi (1980). Uncertainty may result in a negative effect on preferences of risk-averse entities (Keeney and Raiffa 1993) and therefore, undermine exchange outcomes (Gulati 1995).

H3: Behavioral incoherence is negatively related to evaluations of partner performance and future relationship intentions and expectations

It is worth noting that one key point of distinction from the satisfaction literature is that our model of expectations disconfirmation does not construe expectations to be solely partner specific, but to be a more generalized expectation of how opportunism and goal congruence are
related in the marketplace. This is also what differentiates our conceptualization of incoherence from trust, which is partner specific. Incoherence may well be a negative precursor to trust, but our conceptualization of incoherence is richer than mere trust. Specifically we construe expectations that lead to incoherence as consisting of both an intercept ($\tau_{0i}$) and a slope ($\beta_{ni}$). This structural specification represents a conceptual innovation from trust or satisfaction at both the level of analysis and the specification of the belief structure.

**BOUNDARY CONDITIONS ON INCOHERENCE**

We now consider three boundary conditions of the negative impact of incoherence in interorganizational relationships: (i) the focal firm’s dependence on its partner, (ii) the extent to which the relationship has developed and matured, and (iii) bilateral, idiosyncratic investments in the exchange. Together, they reflect the relationship structure of the exchange, its level of development, and the economic stakes of the partners respectively. Each aspect has been widely researched in the interorganizational literature and while we acknowledge that there are many other critical aspects of exchange, we consider these three conditions as a starting point and encourage future research on alternative conditions. An overview of their effects can be depicted as follows:
**Own dependence on partner.** A cornerstone of the marketing channels literature is the notion of power and its flip side, dependence (Blau 1964, Emerson 1962, Gaski 1984). Power is generally conceptualized as the target firm’s potential to influence its counterpart (Frazier 1999, Frazier and Summers 1984) while dependence refers to the degree to which a firm relies on its counterpart for the performance of joint functions, as well as access to scarce resources (c.f., Lusch and Brown 1996). If the focal firm is dependent on its partner, then it must maintain the relationship in order to achieve its desired goals (Frazier 1983). Dependent firms lack control over exchange and thus, are motivated to develop a strong, cooperative long-term relationship with their partner (Ganesan 1994). A potential counterargument is that high power partners can be unpredictable, which adds more uncertainty to the exchange and undermines relationship outcomes (Heide 1994). On balance, however, we expect that:

H4: The negative effect of behavioral incoherence on partner evaluations and future relationship intentions and expectations improves (becomes less negative) as the focal firm’s dependence on the partner increases.

**Relationship development.** The interorganizational exchange literature has had a long-standing interest in how relationships develop over time, beginning with the seminal work of Dwyer et al. (1987), who outlined the processes, behaviors, and outcomes that develop systematically across stages of the relationship: awareness, exploration, buildup, maturity, decline and deterioration. More recent studies have provided empirical tests of their theory (Jap and Anderson 2007) and demonstrated their moderating role in managing control mechanisms (Jap and Ganesan 2000) and salesrep efforts (Jap 2001). As relationships develop, there is a base of actual experience that upholds or updates the focal firm’s beliefs (in contrast to the exploration or awareness phases where experience is more limited). Hence, belief structures tend to crystallize and become stronger. Anderson and Weitz (1989) have found that “older, established dyads appear to possess inertia, that is, a built-in tendency to continue.” Over time,
exchange norms give way to communication efficiencies and increased trust as understanding
across the dyad is established. We propose that incoherence may loom larger in more developed
relationships (than in less developed relationships), as deviations in opportunism from
expectations create a relatively starker contrast to the focal firm’s strong belief structure.
Incoherence creates uncertainty, which undermines partner evaluations and future intentions and
expectations.

**H5:** The negative effect of behavioral incoherence on partner evaluations and future relationship intentions
and expectations increases (becomes more negative) in more developed (i.e., mature) exchanges.

*Bilateral investments.* Bilateral investments are economic resources (e.g., dedicated
personnel, capital equipment, machinery, or processes) that are non-fungible – difficult or
impossible to redeploy to another channel relationship without substantial loss in value
(Williamson 1975, 1985). Mutual investments on both sides of the dyad represent credible,
mutual commitments with economic stakes (Anderson and Weitz 1992). By “binding the hands
of both parties” the partners are incented to act in their mutual best interests over their own
pursuits (i.e., at the cost of the partner). Thus, bilateral investments create strong incentives for
relationship continuity and cooperation, thus mitigating the negative effects of behavioral
incoherence on performance outcomes.

**H6:** The negative effect of behavioral incoherence on partner evaluations and future relationship intentions
and expectations improves (becomes less negative) in the presence of bilateral investments in the
exchange.

**METHODOLOGY**

**DATA COLLECTION AND SAMPLE**

The hypotheses were tested via a longitudinal survey of interorganizational relationships
across four Fortune 50 manufacturing firms: a computer (PC) manufacturer, a photography
equipment manufacturer, a chemical manufacturer, and a brewery. Participation of the firms was
solicited in exchange for customized analyses, presentation of results, and an executive summary brief. Data were collected in two waves with the same respondents. We used data on goal congruence and opportunism from the first wave to calibrate the focal firm’s belief structure (as noted in Equation 1), and then used the estimates of $\beta_0$ and $\beta_1$ to construct our measure of behavioral incoherence and provide test of hypotheses on data collected a year later.

The perspective of Figure 1 is clearly one-sided; i.e., the model can be estimated from the reports of only one side of the relationship dyad. However, in order to leverage the data opportunity we had (i.e., not have to generate additional respondents and maximize our sample size in this effort), we asked the participant firms to request participation from both the buyer and supplier in each exchange. Since there was no *ex ante* theory to suggest that these should differ, we treated the analysis as if no differences exist across the dyad – i.e., each side’s responses were treated as an independent report. Additionally, across the four firms, 200 buyers were asked to report on two supply relationships, so as to maximize the sample size and minimize potential attrition in the second wave. Thus, a dyadic sampling frame of 400 relationships was generated.

**Procedure.** Buyers were mailed questionnaires along with a pre-addressed, postage-paid envelope, a cover letter from the researchers, and a memorandum from corporate executives requesting participation and assuring the confidentiality of their individual responses. The buyers were instructed to identify a supply relationship and a contact individual at the supplier firm as a reference point for completing the items and questions. Upon receipt of the buyer surveys, a parallel survey was sent to their counterpart in supplier firms identifying the buyer firm and individual respondent. Hence, both the buyer and supplier used the other (their counterpart) as a reference point. A test of non-response bias rejects the null hypothesis that
there is a difference in the responses for early versus later respondents (Armstrong & Overton 1977).

**Sample characteristics.** Two hundred seventy-five buyer surveys were returned at time 1 (a 69% response rate; note that the 200 buyers in our sampling frame were asked to report on their relationships with two suppliers). This allowed the mailing of 275 corresponding supplier surveys, of which 220 were completed (an 80% response rate). Buyers who responded in time one were contacted once again a year later, with 167 total surveys returned (61% response). Similarly, suppliers who responded in time one were also surveyed a year later, resulting in 154 completed supplier surveys (70% response). Our final sample consisted of 252 respondents, of whom more than 70% report on their relationship with more than one partner. The total number of observations is 492. Buyers and suppliers had worked with each other an average of 9.3 years. Annual transactions between the buyer and supplier involved over $63 million in materials and services, such as capital equipment, components, services, and maintenance, repair and operating supplies. Collectively, this suggests the relationships in this context have a significant base of history and a variety of exchange experience.

**Respondent competence.** Our hypotheses rely critically on individual perceptions of the focal firm across a wide range of relationship aspects. Hence, we examined both global and specific measures of the respondent’s competency and knowledge of the phenomena. The global measure was the respondent’s tenure with a firm. Buyer respondents averaged 11.2 years of experience in their area and had been with their companies 20.9 years on average. Supplier respondents averaged 15.1 years of experience and 14.2 years of employment with their companies.
Specific measures were also employed to assess the respondent’s knowledge of major issues via a variety of items such as: "How knowledgeable are you about the following in your firm’s relationship with the buyer/supplier firm?" Below were listed items such as “how similar their goals are,” “the nature of unique investments, assets, capabilities, etc. that are used in the relationship,” or “the degree to which they have earned strategic advantages over their competitors.” Responses were indicated on a 7-point scale (1=Not Very Knowledgeable, 7=Very Knowledgeable). Together, the global and specific measures provided some assurance that the key informants were competent, knowledgeable, and relatively involved in completing the survey (cf., Van Bruggen et al. 2002)

**Common method bias.** Since the independent and dependent measures for the model were collected from the same respondent, the potential for common method bias is created. While this was mitigated to some degree by the use of a longitudinal design, it was also impossible that one (let alone over 200) respondent might guess the proposed pattern of relationships, specification of behavioral incoherence, and moderating effects of Figure 1 and systematically alter their responses to impact our findings. However, we did implement a number of steps to reduce the potential for common method bias in accordance with the prescriptions of Podsakoff et al. (2003) and Rindfleisch et al. (2008), such as verifying that our key informants were knowledgeable, guaranteeing respondent anonymity, by mixing specific measurement items so that they were not adjacent to each other, and asking respondents to report on observable (as opposed to non-observable) aspects of the relationship (Crampton and Wagner 1994).
QUESTIONNAIRE AND SCALE DEVELOPMENT

Scale items. Constructs were measured via multiple-item, 7-point scale measures reflecting the view of the focal firm. The measure of goal congruence was designed to reflect the focal firm’s perspective on what the two organizations are doing together. All of the scale items were based on measurements employed in past research. The scale items and reliabilities were presented in Appendix 1. The estimated reliabilities for the constructs were high, averaging .81, with a range of .66 to .91. Construct means, standard deviations, and correlations are presented in Table 1. Together, there appears to be significant heterogeneity in the range of values reflected by these constructs.

Measurement model. A covariance matrix of the observable indicators of each survey construct was used to estimate a first order, latent factor measurement model comprised of goal congruence, opportunism, own dependence, mutual idiosyncratic investment, relationship intentions and expectations, and evaluation of the overall performance constructs. Factor loadings, measurement errors and correlations of and between each construct were estimated via full-information maximum-likelihood techniques in LISREL 8.8 (Jöreskog and Sörbom 2006). Each buyer survey was treated as an independent response throughout the analysis in order to provide the large sample size necessary for stable parameter estimation.

The overall minimum fit function chi-square for this model is 1798.72 (499 df, p<0). The comparative fit index (CFI) and the incremental fit index (IFI) is .96, the Tucker-Lewis index (TLI) is .95. The root mean square error of approximation (RMSEA), a parsimony measure that accounts for potential artificial inflation due to the estimation of many parameters, is .075, suggesting a close/satisfactory fit of the model in relation to its degrees of freedom. The factor loadings and measurement errors are in acceptable ranges and significant at $\alpha=.05$, 

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providing evidence of convergent validity. Discriminant validity among the constructs is stringently examined using the procedure recommended by Fornell and Larcker (1981). Every pair of latent factors passes this test.

**ANALYSIS**

We followed a three step procedure to analyze the data. First, we estimated the focal firm’s belief structure as specified in Equation (1). Second, we constructed a measure of incoherence using Equation (3). Third, we estimated a model to test the effects of incoherence on performance outcomes. We now describe each step in more detail.

*Estimating the focal firm’s belief structure.* We used the data collected from respondents in time period 1 to estimate the focal firm’s belief structure. We sought a method to estimate the belief structure at the level of the individual respondent. Because we had very few replicated observations at the individual respondent level (94% of our respondents provided information on at most two partners), we chose to use a latent class approach to construct belief structures at a segment level, and then used segment level coefficients in combination with segment membership probabilities to estimate individual level belief structures (see pg. 482 of Andrews et al. (2002) for a description of this approach; we also report on the robustness of our approach later in the paper).

We estimated Equation (1) using the LatentGold software, assuming a latent class model at the individual respondent-level. A four segment solution was found to be optimal using several fit criteria, including CAIC (consistent Akaike’s information criterion), AIC (Akaike’s information criterion), AIC3 (Akaike’s information criterion with a per parameter penalty of 3), and BIC (Bayes information criterion) (see Bozdogan 1987; 1993 for a description of these criteria). Two segments showed a relatively strong negative relationship between goal
congruence and opportunism, while the other two showed a relatively weaker, but still negative, relationship. Intercept estimates \((b_0)\) ranged from 2.03 to 5.46 while slope estimates \((b_1)\) ranged from -.16 to -.62. We also obtained the posterior probability of segment membership for all 252 respondents. We then combined the posterior membership probability for each individual respondent and the segment coefficients to obtain individual level belief structure coefficient estimates for each respondent \(i\), as follows:

\[
b_{0i} = \sum_s \text{Prob}_{is} \times b_{0s}
\]

\[
b_{1i} = \sum_s \text{Prob}_{is} \times b_{1s}
\]

where \(\text{Prob}_{is}\) is the probability that respondent \(i\) belongs to segment \(s(s=1,2,3,4)\), \(b_{0s}\) and \(b_{1s}\) are the estimated coefficients associated with segment \(s\).

**Constructing a measure of incoherence.** Constructing the measure of incoherence is a two step process. First, to construct the focal firm’s expectation of opportunistic behavior from their partner in time period 2 (as per Equation 2), we applied its belief structure as embodied in the intercept and slope coefficient (from Equations 4 and 5) and its mean perception of goal congruence with the partner in time period 2, as follows:

\[
E[\text{OPPT}_{ij}] = b_{0i} + b_{1i} \cdot \text{GOAL}_{ij}
\]

Then, as per Equation (3), we took the squared difference between this expectation of opportunistic behavior and the partner’s observed opportunistic behavior (as perceived by the focal firm). This squared difference term is our empirical measure of incoherence, used to test our hypotheses.

**Model to test hypotheses.** We used a linear regression model to test the effect of incoherence and its interactions on evaluation of partner’s performance (EVAL), as follows:
EVAL = γ₀ + γ₁· Opportunism + γ₂· Goal Congruence + γ₃· Incoherence + γ₄· Own Dependence
+ γ₅· Own Dependence × Incoherence + γ₆· Relationship Development Phase + γ₇·
Relationship Development Phase × Incoherence + γ₈· Bilateral Idiosyncratic
Investment + γ₉· Bilateral Idiosyncratic Investment × Incoherence +
γ₁₀· Length of Relationship + γ₁₁· Problem Frequency

We estimated the above model with the focal firm’s relationship intentions and expectations as a
second dependent variable. In estimating these two models, we also controlled for
heteroscedasticity in the data.

Because hypothesis 5 contrasts developed to less developed relationships, we collapsed
our five phase measure into two parts: less developed relationships consisted of respondents who
indicated that their relationship was in the exploration or buildup phase, while more developed
relationships were those in which respondents indicated their state as being in maturity, decline,
or deterioration. This approach accorded with the findings of Jap and Anderson (2007), who
discovered that relationship development constructs such as goal congruence and information
exchange norms peak in the buildup phase and afterwards drops in maturity, decline, and
deterioration.

Note that because our hypotheses did not assess change from time 1 to time 2, we did not
include time 1 lag variables in our analysis. While one might argue that time 2 performance is
related to time 1 performance, the source of performance at time 1 is likely related to predictors
at time t-1. For any time series, lagged performance in one period is related to lagged predictors
from two periods back (c.f., Heckman and Learner 2006). This pattern of nearly infinite regress
is consistent with autocorrelated performance after the first two periods of a time series. The
only way to be certain about the causal order is to go back to the point of initial causation
between the predictors and the outcomes, which is of course, impractical. However, if our data
indicate significance between a set of predictors and outcome variables over a one-year time
period, we might infer that the statistical significance between our predictor and outcome variables is mirrored throughout similar subsequent time periods from $t_0$. Collectively, over many time periods, they would demonstrate that the hypothesized predictors drive specific outcomes over time, controlling for the effects of inertia.

RESULTS

A summary of the results are presented in Table 2. In support of H1, perceptions of partner opportunism has significant negative effects on the focal firm’s evaluation of partner performance (- .23, $p < .01$) and relationship intentions and expectations (- .21, $p < .01$), underscoring the detrimental consequences of opportunistic behavior. Corroborating H2, perceptions of the partner’s goal congruence has a significant positive effect on the focal firm’s evaluation of partner performance (.37, $p < .01$) and relationship intentions and expectations (.23, $p < .01$), consistent with the notion of goal congruence as a key safeguarding mechanism of performance outcomes. In addition, we found strong evidence affirming H3, which suggests negative effects of incoherence on the evaluation of partner performance (- .63, $p < .01$) and relationship intentions and expectations (- .42, $p < .01$). Interestingly, the size of the negative effects of incoherence is about twice the effects brought by either opportunism or lack of goal congruence. This suggests that incoherence rooted in the discrepancy between the expected behaviors arising from the belief structure and observed behaviors plays a much larger role than the damaging behavior (i.e., opportunism) or attitude (i.e., goal incongruence) itself.

Boundary conditions. Hypotheses 4 to 6 were tested by estimating the relationships between incoherence and performance outcomes among the three conditions (dependence, relationship development, and bilateral idiosyncratic investments) in buyer-seller relationships. Own dependence has a non-significant effect on the evaluation of partner performance (.01, $p >
.10) and relationship intentions and expectations (-.02, p > .10). However it does significantly moderate (reduce) the negative effects of incoherence on evaluation of partner performance (.32, p < .05) and relationship intentions and expectations (.21, p < .05). This demonstrates that the greater the focal firm’s dependence, the more tolerant it is of behavioral incoherence. Hence, H4 is supported.

Similarly, the stage of relationship development itself has no significant effect on the evaluation of partner performance (.01, p > .10) and relationship intentions and expectations (-.06, p > .10). However, the negative effects of incoherence on performance outcomes are exacerbated in more developed relationships. Specifically, the more mature the business relationship, the more negative the impact of incoherence on evaluation of partner performance (-.09, p < .05) and relationship intentions and expectations (-.12, p < .05). Thus, H5 is supported.

Lastly, bilateral idiosyncratic investments have a positive effect on the evaluation of partner performance (.27, p < .01) and relationship intentions and expectations (.38, p < .01), consistent with the past literature that underscores the role of these investments in enhancing exchange outcomes (e.g., Anderson and Weitz 1992, Heide and John 1990, Jap 1999, Jap and Anderson 2003, Noordewier et al.1990). The results also suggest that in addition to this, the negative effects of incoherence on performance outcomes become more positive in the presence of these investments, for the evaluation of partner performance (.31, p < .05) and relationship intentions and expectations (.27, p < .05). This attests that the greater the bilateral idiosyncratic investments in exchange, the better able the firms are to accommodate behavioral incoherence. Therefore, H6 is supported.
ROBUSTNESS CHECKS

As with most modeling and empirical analyses, we made a number of assumptions and choices related to the measurement of our constructs, model and analysis, and our sample. In this section, we discuss those assumptions, and provide empirical tests of the validity of each.

Validity of Incoherence Measure. We first assess the validity of our measure of incoherence, as described in Equations 1 to 6, which is the primary focus of the analyses. The measure of incoherence depends critically on calibration of individual respondent-level belief structures. While this approach to measuring belief structures and incoherence has a good theoretical pedigree as discussed previously in the paper, we chose to empirically test its validity to ensure that (i) our findings are not dependent on our latent class approach to calibrate the belief structures, (ii) the belief structures underlying our measure of incoherence are relatively stable over time, (iii) our measure of incoherence provides a better explanation of performance outcomes than an alternative simpler measure, and (iv) our measure of incoherence is correlated, yet distinct enough from related measures such as trust.

We relied on the latent class approach outlined in equations (4) and (5) to construct individual respondent-level belief structures, which were then used to construct the measure of incoherence. To ensure that the results were not purely driven by this calibration approach, we used a random effects model to estimate respondent-level belief structures. We then used those respondent-level belief structures to construct a new measure of incoherence. The two measures of incoherence are constructed on the basis of belief structures estimated by two different methods – latent class and random effects. We find that the two measures are highly correlated ($\rho = 0.90$), providing multi-method validity to our measure. Not surprisingly then, we also find
that using this new measure of incoherence obtains results that are substantively similar to those reported in Table 2.

Second, our theory suggests that expectations of partner behavior are based on generalized belief structures. An implicit assumption is that these belief structures are relatively stable over time, in particular because of their more general nature. To test whether this is the case, we applied the same latent class estimation method to obtain each respondent’s belief structure coefficients at time 2 (as specified in Equations 4 and 5). We can now compare the underlying belief structures across the two time periods to examine the stability of a respondent’s belief structure. Because the two dimensional nature of the belief structure (i.e., an intercept and slope) precludes a simple comparison, we estimated measures of incoherence based on belief structures calibrated with time 1 and time 2 data. The correlation in measures of incoherence across these two time periods is 0.62, indicating that our measure is relatively stable over time.

Third, we defined incoherence as the squared difference between generalized expectations of behavior and observed behavior, where the expectation of opportunism comes from a combination of the firm’s prior experiences (as captured in the generalized belief structure) and its current perception of goal congruence. But it remains to be seen whether a simpler measure of “deviation from expectations” might have an equal, or even stronger, effect on performance outcomes. To test this, we constructed a simpler measure by taking the squared difference between currently observed opportunism (i.e. measured in time 2) and previously observed opportunism (i.e., measured in time 1) within the dyad. We included this alternative measure in the test of the hypotheses instead of our more nuanced incoherence construct (as defined in Equation 3). We find that this alternative simpler measure does not have a statistically
significant effect on either of the performance outcome variables, adding further validity to our more nuanced measure of incoherence.

Fourth, our measure of incoherence could be highly correlated with related measures such as trust. While we do not have a trust measure at the organizational level, we find that the correlation between incoherence and interpersonal trust is moderate ($\rho = -0.37$), albeit significant. This relatively moderate correlation indicates that incoherence is more than just trust, but it also adds some convergent validity to our measure because it is related to other constructs to which it ought to be related.

**Validity of the Model & Analysis.** We make two major assumptions in our model and analysis – the first relates to the squared term in defining incoherence, while the second is that including incoherence in our model improves the explanation of performance outcomes. We examine each of these assumptions next.

First, we assume that negative effect on performance outcomes can result from a partner behaving less or more opportunistically than expected, where the expectations are conditional on the level of goal congruence between the parties. Therefore, the negative effect of behavior that deviates from expectations is invariant to whether the behavior is better or worse than expected, (which is why we used a squared term to define incoherence). While the squared term was found to have a negative effect on performance outcomes, an alternative argument could be made that the squared term is simply capturing some part of a potential non-linear relationship between opportunism and performance outcomes (i.e., very high levels of opportunistic behavior result in proportionally much greater negative effects on performance outcomes) But this would be the case only if (i) incoherence, as measured in our data, is primarily of a negative type – that is when observed opportunism is greater than expected, and/or (ii) the negative effect of
incoherence on performance outcomes disappears when observed opportunism is less than expected. The first condition is not satisfied in our data because incoherence is of the positive type (observed opportunism is less than expected) in 280 of the 492 cases (56%), suggesting that instances of negative and positive types of incoherence are about equal in the data.

To test whether the negative effect of incoherence on performance outcomes disappears when observed opportunism is less than expected, we constructed a dummy variable which took on the value 1 if observed opportunism was less than expected (i.e., better partner behavior than expected), and 0 otherwise. We included this dummy variable along with its interaction with incoherence in our models (Equation 6 and its equivalent for own evaluation of partner’s performance as the dependent variables). In the case of relationship intentions and expectations, the interaction effect was found to be statistically non-significant at the 10% level, indicating that the negative incoherence effect is invariant to whether the partner behaves better or worse than expected. In the case of own evaluation of partner performance, the interaction effect was negative and statistically significant (-.19, p < 0.01), indicating that the negative effect of incoherence on own evaluations of partner performance is even stronger when the partner behaves less opportunistically than expected. While we did not expect this result (which we find interesting), it also suggests that it is not the non-linearity of the relationship between opportunism and performance outcomes that is driving the negative incoherence effect. It is the deviation from expected behavior (even if the deviation is a good one) which drives the negative incoherence effect.

The second model validity test that we conducted was to compare the fit of our model (in equation 7) to the data against a model that excluded all incoherence terms. We find that our model of evaluation of partner performance is a better fit to the data (AIC of our model is 903 vs. 27.
916 for a model with no incoherence terms). Similarly our model of relationship intentions and expectations is also superior to a model with no incoherence terms (AIC of our model is 1020 vs. 1025 for model with no incoherence terms). These findings allow us to say that our model improves the explanation of performance outcomes.

**Validity of Incoherence Effect across Sub-Samples.** At the outset of the analyses, we assumed that incoherence would be similarly manifested across the dyad, regardless of whether the organizational respondent was a buyer or a seller. We assess the validity of this assumption by re-estimating equation 7, adding a supplier dummy coded 1 if a supplier and 0 if a buyer and an interaction term between this dummy and behavioral incoherence. Neither the supplier dummy nor the interaction term had a significant effect on the performance outcomes, providing some support for our assumption that incoherence has similar effects across the dyad.

**DISCUSSION**

The results of this research accord with past work suggesting that opportunism, dependence, and frequent problems have an undermining effect on interorganizational exchange, while goal congruence and bilateral idiosyncratic investments have the opposite effects. Moreover, we extend our understanding of this area in several important ways. First, we introduce the notion of behavioral incoherence in interorganizational relationships and show that uncertainty created by the discrepancy between a focal partner’s generalized beliefs and the partner’s specific behavior holds deleterious consequences for exchange. Specifically, its impact is nearly twice that of the opportunistic behavior itself. Additionally, we find that even when incoherence is positive (i.e., less opportunistic than expected), has an even stronger negative impact on the focal firm’s future relationship intentions and expectations. Paradoxically, this
suggests that “being too good,” or widely exceeding expectations can be detrimental to relationship development. In fact, it may actually contribute to dissolution.

Second, we find that each firm’s belief structure, based on the marketplace and rooted in past experiences, plays a powerful role in determining exchange performance. We find that such a belief structure has a much greater impact on outcomes than the opportunistic behavior itself, suggesting that firms rely more on beliefs even in the presence of current, observed data. Just as individuals possess beliefs about covariation between past events and then bring those covariation judgments to bear upon a given set of data (e.g., Pechmann and Ratneshwar 1992), organizational partners might also develop belief structures that they rely on, as shown in this study. Such belief structures are useful for providing a means of explaining the past, controlling the present, and predicting the future, thereby maximizing the likelihood that desired outcomes can be obtained and aversive outcomes avoided (Alloy and Tabachnik 1984).

One implication of the finding that belief structures are powerful is that managers (and organizations) may not have an accurate view of reality. This resonates with Vosgerau et al. (2008), who find that even in long-standing relationships, companies do not know how accurate their perceptions are, even when they believe that they correctly perceive their counterpart’s relational closeness. Another implication is that these belief structures constrain perceptions in a way that primarily supports a negative view of the exchange relationship. This may explain why it is that relationships that hit a downward spiral can continue to cycle out of control and why it is difficult to break out of these dysfunctional patterns. A final implication is that behavioral incoherence, in smaller doses, has less of an undermining effect on the relationship. Perhaps the way to break a spiral of suspicion is to engage in smaller, incremental changes in behavior and over time, results in less adverse consequences.
Third, we identify the boundary conditions of behavioral incoherence. Firms that are more dependent on their partner are also more tolerant of their partner’s behavioral incoherence. This could be because as the weaker partner, the focal firm has fewer alternatives and is not in a position to easily terminate the relationship (Frazier et al. 1989, Molm et al. 1999, Stern and Reve 1980). We also find that as interorganizational exchanges mature, the impact of behavioral incoherence is strengthened. It could be that as relationships mature and knowledge of the partner increases and deepens, there is less variability or change in belief structures. A history of working together creates a shared identity in which the parties learn that cooperation and mutual undertaking can benefit the exchange as a whole. Thus, when incoherence does occur, the uncertainty may stand in stark contrast to beliefs that have been widely held and this has a corrosive effect on the relationship.

Together, these results concur with the perspective that market experience matters (Blau 1964, Granovetter 1985, 1992); in addition, we show how market experience matters through the creation of a strong frame of references – a belief structure – that filters all new experiences and consequently determines the impact of these new experiences on the state and performance of the relationship. In contrast to studies that show that a greater accumulation of exchange history leads to greater expectations of continuity (Poppo et al. 2008), we find that this effect can be reversed in the presence of behavioral incoherence. Surprisingly, a history of exchange is not always a positive buffer against relationship deterioration; in fact, such relationships are actually more prone to the deleterious effects of uncertainty than less developed relationships. Further, bilateral investments are found to play a critical role in safeguarding relationships against behavioral incoherence. This accords with the findings of Jap and Anderson (2003), who find that even as ex post opportunism in exchange increases, the mutual “tying of the hands” that
come with both parties having financial investments at risk can be a powerful mitigation of the poisons that kill relationships.

**MANAGERIAL IMPLICATIONS**

Collectively, this research extends our understanding of how relationships are undermined through the belief structures, processes, and behaviors surrounding interorganizational exchange. In doing so, we generate implications for organizations who must protect key exchanges from the “dark side” of long-term, close relations. First, it suggests that quick, particularly drastic changes in behavior are unhealthy for the relationship. This echoes the findings of Jap and Anderson (2007), who find that relationships have difficulty recovering from negative histories. A bad history extracts a steep price that can endure over time. Improving relationships or recovering from behavioral incoherence will likely be a slow process that requires patience, perseverance, and steady efforts over time. Sudden changes in behavior are likely to be met with suspicion.

Second, the results underscore the value of bilateral, idiosyncratic investments in mitigating the negative impact of behavioral incoherence. By creating mutual, economic stakes, managers have a strong assurance that both organizations are motivated to act in ways that are supportive of the joint exchange. These stakes make it difficult for each party to terminate the relationship prematurely or unnecessarily, and avoids the asymmetric risk exposure that occurs when only one party has made non-fungible investments in the exchange. Such credible, real stakes are extremely powerful for long-term commitment (Anderson and Weitz 1992) and understanding how these structures are updated and what can be done to change these belief structures over time.
FUTURE RESEARCH

While we have investigated one form of incoherence with respect to opportunistic behavior, it remains to be seen whether incoherence is similarly manifested with other relationship characteristics. For example, it might be that incoherence in relational contracting norms such as solidarity, participation, and flexibility (MacNeil 1980) or supportive norms such as trust does not have a negative impact on exchange performance. Although incoherence creates uncertainty, which has an undermining effect, it may be the case that with more positive norms such as trust, the overall impact of trust remains positive, albeit reduced. This is because trust generally has a more positive impact on relationships than opportunism.

Further, the dynamic process of how belief structures are constantly being updated through present experiences, is worthy of further investigations. More longitudinal observations and innovative methods are required to enable such a richer understanding of the phenomena. Another avenue for future work would be to consider alternative specifications for how behavioral incoherence is manifested, particularly at the interorganizational and interpersonal levels. Campbell’s (1958) notions of entitativity, or the degree of correspondence between individual exemplars and a group identity, represents a promising direction for research. The notion of entitativity has enjoyed a resurgence of interest in social psychology and holds important implications for how beliefs are organized and used to form impressions of individual and group targets (McConnell et al. 1997, Crawford et al. 2002). Entitativity represents an alternative specification of incoherence that could be further investigated with respect to various Gestalt principles of perceptual organization such as proximity, similarity, collective movement, and common fate. In marketing, Palmatier et al (2007) represent one example of how entitativity operates in the context of individual sales rep actions relative to those of the selling firm.
In sum, we have identified a novel mechanism of relationship demise. Our results indicate that incoherence – whether positive or negative – undermines present and future states of the exchange, and its impact is twice that of observed behavior. Fortunately, its effects can be mitigated by the organizational structure of the interorganizational relationship (i.e., power asymmetry, bilateral idiosyncratic investments, and relationship stage). By observing the consequences of incoherence and the conditions under which these effects are inhibited, we are able to infer something about the seeds of interorganizational dissolution. We might also have stimulated thinking on how to better structure exchange and manage it on an ongoing basis.
FIGURE 1
CONCEPTUAL OVERVIEW OF THE EFFECT OF INCOHERENCE ON PERFORMANCE OUTCOMES

- Expectations (belief structure)
  - Goal Congruence
  - Opportunistic Behavior

- Prior Information
  - Discrepancy

- Current Behavioral Observations and Inferences
  - Behavioral Incoherence

- Remedies
  - Own Dependence
  - Bilateral Idiosyncratic Investments
  - Relationship Development

- Performance Outcomes
  - Evaluation of Partner Intentions & Performance Expectations

- Moderating Effects

Indicates a moderating effect
Dashed line indicates formulations of behavioral incoherence
<table>
<thead>
<tr>
<th>Variable</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std Dev</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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</thead>
<tbody>
<tr>
<td>1. Intentions &amp; Expectations</td>
<td>1.00</td>
<td>7.00</td>
<td>5.77</td>
<td>0.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Partner’s Performance</td>
<td>1.33</td>
<td>7.00</td>
<td>5.29</td>
<td>1.02</td>
<td>0.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Partner’s Opportunistic Behavior</td>
<td>1.00</td>
<td>6.63</td>
<td>2.12</td>
<td>0.88</td>
<td>-0.42</td>
<td>-0.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Goal Congruence</td>
<td>2.00</td>
<td>7.00</td>
<td>5.06</td>
<td>0.81</td>
<td>0.59</td>
<td>0.71</td>
<td>-0.52</td>
<td></td>
<td></td>
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<tr>
<td>5. Behavioral Incoherence</td>
<td>0.00</td>
<td>9.76</td>
<td>0.61</td>
<td>1.01</td>
<td>-0.27</td>
<td>-0.33</td>
<td>0.26</td>
<td>-0.22</td>
<td></td>
<td></td>
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<tr>
<td>6. Power Dependence</td>
<td>1.00</td>
<td>7.00</td>
<td>4.31</td>
<td>1.02</td>
<td>0.21</td>
<td>0.25</td>
<td>0.03</td>
<td>0.19</td>
<td>-0.12</td>
<td></td>
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<tr>
<td>7. Mutual Investment</td>
<td>1.75</td>
<td>7.00</td>
<td>5.24</td>
<td>0.97</td>
<td>0.57</td>
<td>0.57</td>
<td>-0.09</td>
<td>0.47</td>
<td>-0.32</td>
<td>0.42</td>
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</tr>
<tr>
<td>8. Length of the Relationship</td>
<td>0.00</td>
<td>67.00</td>
<td>9.31</td>
<td>10.09</td>
<td>0.00</td>
<td>-0.02</td>
<td>-0.07</td>
<td>-0.05</td>
<td>0.01</td>
<td>-0.03</td>
<td>-0.10</td>
<td></td>
</tr>
<tr>
<td>9. Problem Frequency</td>
<td>1.00</td>
<td>7.00</td>
<td>2.91</td>
<td>1.10</td>
<td>-0.35</td>
<td>-0.45</td>
<td>0.46</td>
<td>-0.39</td>
<td>0.24</td>
<td>0.03</td>
<td>-0.14</td>
<td>-0.05</td>
</tr>
</tbody>
</table>

Note: Correlations in bold are not significant, while those in italics are significant at p< 0.05. All other correlations are significant at p< 0.01.
TABLE 2
EFFECTS OF OPPORTUNISM, GOAL CONGRUENCE
AND INCOHERENCE ON EVALUATIONS OF PARTNER PERFORMANCE
AND RELATIONSHIP INTENTIONS AND EXPECTATIONS

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variable</th>
<th>Own Evaluation of the Partner’s Performance</th>
<th>Relationship Intentions &amp; Expectations</th>
<th>Result</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Standardized Parameter Estimate (t-statistic in parentheses)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>Partner’s Opportunistic Behavior</td>
<td>-0.23&lt;sup&gt;a&lt;/sup&gt; (-6.86)</td>
<td>-0.21&lt;sup&gt;a&lt;/sup&gt; (-6.04)</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>Dyad’s Goal Congruence</td>
<td>0.37&lt;sup&gt;a&lt;/sup&gt; (13.20)</td>
<td>0.23&lt;sup&gt;a&lt;/sup&gt; (6.71)</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>Incoherence</td>
<td>-0.63&lt;sup&gt;a&lt;/sup&gt; (-3.46)</td>
<td>-0.42&lt;sup&gt;b&lt;/sup&gt; (-2.51)</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Own Dependence</td>
<td>0.01 (0.46)</td>
<td>-0.02 (-0.62)</td>
<td></td>
</tr>
<tr>
<td>H4</td>
<td>Own Dependence X Incoherence</td>
<td>0.32&lt;sup&gt;b&lt;/sup&gt; (2.03)</td>
<td>0.21&lt;sup&gt;b&lt;/sup&gt; (2.02)</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Relationship Development Phase</td>
<td>0.01 (0.37)</td>
<td>-0.06 (-1.52)</td>
<td></td>
</tr>
<tr>
<td>H5</td>
<td>Relationship Development Phase X Incoherence</td>
<td>-0.09&lt;sup&gt;b&lt;/sup&gt; (-2.05)</td>
<td>-0.12&lt;sup&gt;b&lt;/sup&gt; (-2.75)</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Bilateral Idiosyncratic Investment</td>
<td>0.27&lt;sup&gt;a&lt;/sup&gt; (8.77)</td>
<td>0.38&lt;sup&gt;a&lt;/sup&gt; (10.06)</td>
<td></td>
</tr>
<tr>
<td>H6</td>
<td>Bilateral Idiosyncratic Investment X Incoherence</td>
<td>0.31&lt;sup&gt;b&lt;/sup&gt; (2.22)</td>
<td>0.27&lt;sup&gt;b&lt;/sup&gt; (2.16)</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Length of the Relationship</td>
<td>0.01 (0.42)</td>
<td>0.03 (0.93)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Problem Frequency</td>
<td>-0.15&lt;sup&gt;a&lt;/sup&gt; (-5.68)</td>
<td>-0.11&lt;sup&gt;a&lt;/sup&gt; (-3.18)</td>
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<tr>
<td>R-Square</td>
<td>0.67</td>
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<td>0.53</td>
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<tr>
<td>AIC</td>
<td>903</td>
<td></td>
<td>1020</td>
<td></td>
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</tbody>
</table>

Significant at: <sup>a</sup>p<0.01, <sup>b</sup>p<0.05, <sup>c</sup>p<0.10 (two-tailed).
APPENDIX

MEASURES OF CONSTRUCTS

All the measures are based on 7-points Likert-type scale and are anchored from strongly disagree = 1 to strongly agree = 7, unless otherwise noted. “They” and “us” refer to the two firms, the buyer and supplier together.

α refers to Cronbach alpha scale reliability.
(R) denotes reversed score.

**Goal Congruence of the Dyad** (α = 0.68 in prior time period & α = 0.72 in current period), adapted from Jap (1999)
They support each other's objectives.
They have different goals. (R)

**Observed Opportunism** (α = 0.90 in prior time period & α = 0.91 in current period), adapted from Jap and Anderson (2003)
When a problem occurs, how often will the buyer (supplier) do the following? (1= Hardly Ever, 7= Very Often)
They make hollow promises.
They are aloof toward us.
They "window dress" their efforts to improve.
They expect us to pay for more than our fair share of the costs to correct the problem.
They are unwilling to accept responsibility.
They make false accusations.
They provide false information.
They fail to provide proper notification.

**Relationship Intentions and Expectations** (α = 0.87), adapted from Jap and Anderson (2003)
Our relationship with this firm will last far in to the future.
We expect to continue working with this firm on a long-term basis.
We expect to terminate our relationship with this firm soon. (R)

**Overall Evaluation of Partner’s Performance** (α = 0.88), adapted from Kumar et al. (1992)
Our association with this supplier/buyer has been a highly successful one.
The supplier/buyer leaves a lot to be desired from an overall performance standpoint.
If we had to give the supplier a performance appraisal, it would be outstanding.
Overall, the results of our relationship with the supplier/buyer have fallen short of our expectations. (R)

**Own Dependence on Other Firm** (α = 0.70), adapted from Kumar et al. (1995)
This supplier/buyer is critical to our future performance.
Our firm is dependent on this supplier/buyer.
This supplier/buyer is important to our financial performance.

**Bilateral Idiosyncratic Investments** (α = 0.82), adapted from Anderson and Weitz (1992)
If this relationship were to end, they would be wasting a lot of knowledge that's tailored to their relationship.
If either company were to switch to a competitive buyer or vendor, they would lose a lot of the investments made in the present relationship.
They have invested a great deal in building up their joint business.
They have developed procedures, routines, and understanding tailored to their relationship.
Relationship Phase from Jap and Ganesan (2000)
Relationships typically evolve through a number of phases over time. Which of the following best describes your firm’s current relationship with X? (Check only one)

1. Exploration - Both firms are discovering and testing the goal compatibility, integrity, and performance of the other as well as potential obligations, benefits, and burdens involved with working together on a long-term basis.

2. Buildup - Both firms are receiving increasing benefits from the relationship and a level of trust and satisfaction has been developed such that they are more willing to become committed to the relationship on a long-term basis.

3. Maturity - Both firms have an on-going, long-term relationship in which both are receiving acceptable levels of satisfaction and benefits from the relationship.

4. Decline - One or both members have begun to experience dissatisfaction and is contemplating relationship termination, considering alternative manufacturers or customers, and is beginning to communicate an intent to end the relationship.

5. Deterioration - The firms have begun to negotiate terms for ending the relationship and/or are currently in the process of dissolving the relationship.

Problem Frequency
How frequently do problems arise between your firm and this firm? (1=hardly ever, 7=very often)

Interpersonal Mutual Trust (α = 0.92), Adapted from Jap (1999)
We are very honest in dealing with each other.
We trust each other.
We consider each other's interests when problems arise.
REFERENCES


