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Author(s): Edward J. Lawler and Jeongkoo Yoon

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## COMMITMENT IN EXCHANGE RELATIONS: TEST OF A THEORY OF RELATIONAL COHESION\*

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Edward J. Lawler  
Cornell University

Jeongkoo Yoon  
Cornell University

*We develop and test a theory of relational cohesion, which predicts how and when people in exchange become committed to their relationship. The theory focuses on dyads within networks and predicts that more equal power and greater "total," or mutual, power promote exchanges that arouse positive emotions and create perceptions of the relation as a cohesive unit. The behavioral consequences are a tendency for actors to (1) stay in the exchange relation despite attractive alternatives, (2) provide each other token gifts, and (3) contribute to a new joint venture. Three laboratory experiments test and support the theory. Our results suggest that complementary emotional/affective and uncertainty-reduction processes explain the effect of repetitive exchanges on commitment formation. The broad implication is that frequent exchanges by the same actors in a network result in their relation becoming a valued object in itself and a source of informal constraint on malfeasance.*

We develop and test a theory that predicts how and when the structure of power, defined in power-dependence terms (Emerson 1981), fosters a cohesive relation and commitment behavior in a dyad within a network. Power is a structural *capability*, distinct from its actual behavioral use and its impact on the distribution of payoffs (Emerson 1972; Cook and Emerson 1978; Bacharach and Lawler 1981; Molm 1987, 1990; Lawler 1992b); power creates incentives for some actors to exchange repetitively or more frequently than others and, thereby, fosters "exchange relations" (Emerson 1972,

1981). Sometimes exchange relations are strong, friendly, and close; sometimes they are weak, impersonal, and distant; but in exchange networks they are likely to fall somewhere between these extremes. We use the concept of *relational cohesion* to capture the effects of repeated or frequent exchanges on actors' definition of their relationship as a unifying force or an object of attachment in its own right (Lawler 1992a; Lawler and Yoon 1993). In an exchange network, dyads with greater relational cohesion should exert greater informal constraints on opportunism or malfeasance (Williamson 1981; Granovetter 1985).

We argue specifically that frequent exchanges between two actors in a network tend to make their relation an expressive object, valuable in its own right, because mild, positive emotions are produced by successful exchanges, and parties in these exchanges attribute this emotion in part to their relationship (Lawler 1992a; Lawler and Yoon 1993). The emergence of an exchange relation can be viewed as incipient "group formation," produced by growing perceptions of interdependence (see Rabbie and Horowitz 1988; Kramer 1991), and the concept of commitment can capture the behavioral consequences of this process.

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\* Direct communications to Edward J. Lawler, Department of Organizational Behavior, School of Industrial and Labor Relations, Cornell University, Ithaca, New York 14853 (Internet: ejl3@cornell.edu). The authors express appreciation to Barry Markovsky for helpful comments on this line of work and thank Mouraine Baker and Michael Large for comments on the substance of this project and for assistance in the data collection. We also thank the ASR Editor and three anonymous reviewers for their constructive comments. This research was supported by a grant to the first author from the National Science Foundation (SES-9222668). [Reviewers acknowledged by the authors are Irving Tallman, Joseph Whitmeyer, and David Willer. —ED.]

*Commitment* is defined here as the attachment an individual feels to a collective entity, such as a relation, group, or organization (Kanter 1968, 1972). Such person-to-group attachment can involve instrumental (utilitarian), affective (emotional), or normative ties (e.g., Parsons 1951). *Instrumental commitment* is based on the perceived costs of leaving the collective, whereas *affective commitment* is an emotional or cathectic attachment to the group. *Normative commitment* is the moral obligation to uphold collective rules (Kanter 1968; Meyer, Allen, and Gellatly 1990). For example, in an employment relationship, employees with strong affective attachment stay "because they want to," employees with instrumental attachment stay "because they need to," and employees with normative attachment stay "because they feel they ought to" (Meyer et al. 1990: 710). We focus here on emotional/affective attachment and, in our case, the exchange relation is the group or collective entity.

Social structures—whether based on power, status, or wealth—produce different frequencies of interaction among a set of actors. This particular impact of social structure is basic to Emerson's (1972, 1981) microtheorizing about "exchange relations," because the repetitive transactions that constitute exchange relations stem from social-structural conditions (Emerson 1972; Cook and Emerson 1978). It also is basic to Blau's (1977) macrotheorizing about how and why structural dimensions shape social contacts or "social associations," and to Granovetter's (1985) argument that economic behavior is embedded in social relations. One explanation for the effect of structure on exchange frequency is homophily—people interact more with similar others than with dissimilar others (Blau 1977; McPherson, Popielarz, and Drobnic 1992). Another explanation involves incentives—structures make exchanges with some actors more "profitable" than exchanges with others (Emerson 1972, 1981; Cook et al. 1983; Molm 1987). Exchange theory focuses on incentives. We attempt to show how such instrumentally based exchange relations actually foster emotionally based, expressive ties between actors (Lawler and Yoon 1993). In a broad sense, a theory of relational cohesion suggests that exchanges build the foundation for percep-

tions of similarity (homophily) between actors and for the interpersonal relations within which their economic behavior is embedded.

The development of relational cohesion and commitment is an endogenous process that emerges from the interaction between actors. Our theory poses two key questions about this microprocess: First, when do the structures that produce frequent exchanges between actors lead them to perceive their relationship as a positive social object unto itself? If actors perceive their relation as a distinct social object in Parsons's (1951) terms, or as a "third force," in Berger and Luckmann's (1966) terms, they should be willing to act with reference to that social object. Second, do emotional/affective processes help account for the emergence of exchange relations as a distinct social object? If so, it may be possible to incorporate emotional processes explicitly into social-exchange explanations for "stickiness" in markets, for the development of trust in networks, and for the formation of strong "one-on-one" relations at key junctures of an interorganizational field.

Suggesting that structural power (or power-dependence) produces commitment among those who exchange repeatedly over time is not a new idea (see Cook and Emerson 1978, 1984; Tallman, Gray, and Leik 1991). The standard exchange-theory explanation for the causal chain—structural power → exchange frequency → commitment—is that frequent exchanges reduce uncertainty. Thus, actors who exchange frequently with each other come to know each other more, find each other's behavior more predictable, and believe they have similar orientations to the exchange situation (Emerson 1981; Cook and Emerson 1978, 1984). The development of trust (Coleman 1990), relation-specific assets (Williamson 1981), and social embeddedness (Granovetter 1985) can all be seen as parts of a general uncertainty-reduction process (see also Kollock 1994).

Our recent work (Lawler and Yoon 1993), however, indicates that the commitment process emerging from repetitive exchanges has important emotional/affective components (also see Homans 1961). We have shown that consummated exchanges give actors an "emotional buzz" in much the same way as jointly accomplishing a task with another

fosters feelings of satisfaction, enthusiasm, or excitement. These feelings mediate the impact of structural power and exchange frequency on commitment behavior. Thus, we have introduced an intervening emotional/affective link between frequent exchanges and commitment behavior.

In the theory of *relational cohesion* we propose and test here, we seek to explain how and when emotional processes generate commitment. We report the results of three separate laboratory experiments, each testing the theory with a different form of commitment behavior: *staying in the relation* when good alternatives exist, *unilaterally providing token gifts* to each other, and *contributing to a joint venture* that constitutes a social dilemma.<sup>1</sup> Stay behavior is the traditional indicator of commitment in work on organizations (Halaby and Weakliem 1989; Mueller and Price 1990). Gift-giving can be construed as symbolic of a relation as long as the gifts are *token* (i.e., have little or no extrinsic value), *unilateral* (i.e., given without knowing whether the other is giving), and *noncontingent* (i.e., given without an explicit expectation of reciprocity) (Heath 1975; Lawler and Yoon 1993). Contributing to a joint venture (i.e., shared pool) puts individual resources at risk (Coleman 1990). The theory of relational cohesion posits an endogenous process by which the structural potential for cohesion is actualized in “relational cohesion,” that is, in the actors’ definitions of the relation as a unifying force in the situation. Commitment behavior, whether instrumental, affective, or normative, is a proximal result of relational cohesion.

## A THEORY OF RELATIONAL COHESION

Several scope conditions identify the basic social context to which the theory of relational cohesion may be applied. First, there are two focal actors who negotiate repeatedly with each other in the context of a larger net-

work. They both have at least one alternative other with whom they may exchange if they do not negotiate an agreement with each other, and the network is “negatively-connected” because each can exchange with only one other at a given point in time (Emerson 1972, 1981; Cook et al. 1983). Second, the expected benefits within the focal relation are greater than the expected benefits from the alternative relation, and thus, there are structurally based incentives for actors to negotiate and successfully exchange with each other (Homans 1961). Many ongoing exchange relations fit this characterization. Third, the exchanges are negotiated in an explicit manner rather than being nonnegotiated (see Molm 1994 for more discussion). The emphasis on a particular focal dyad distinguishes this work from much recent research on exchange networks (see Skvoretz and Willer 1993). Some examples of dyads that fit these three scope conditions are two college roommates negotiating household duties and responsibilities during an academic year, labor and management representatives negotiating contracts repeatedly over time, and two corporations negotiating repeatedly to buy and supply raw materials.

The theory reduces to a causal model, portrayed in Figure 1. In this model, the dimensions of structural power indirectly produce commitment behavior through a sequence of theoretically-specified steps—the endogenous process. The endogenous process intertwines behavior (exchange frequency), mild positive emotions (pleasure/satisfaction, interest/excitement), and perceptions of the relation as a unit (relational cohesion). Given this theoretical model, indirect effects of power, not direct effects, constitute support for the theory. In the following pages, we formalize the theory, define key terms, and explicate the rationale for the predicted paths in the causal model shown in Figure 1.

### *Power and Structural Cohesion*

From a power-dependence perspective (Emerson 1972, 1981), A’s power capability in relation to B ( $P_{ab}$ ) is determined by B’s dependence on A ( $D_{ba}$ ), and B’s power capability in relation to A ( $P_{ba}$ ) is determined by A’s dependence on B ( $D_{ab}$ ) (Emerson 1972). The dependence of A on B ( $D_{ab}$ ) is, in turn,

<sup>1</sup> Contributing to a joint venture is a social dilemma when individual and collective interests do not coincide—the payoffs from contributing are contingent on the other’s contributing, and both gain more individually if they do not contribute when the other does.

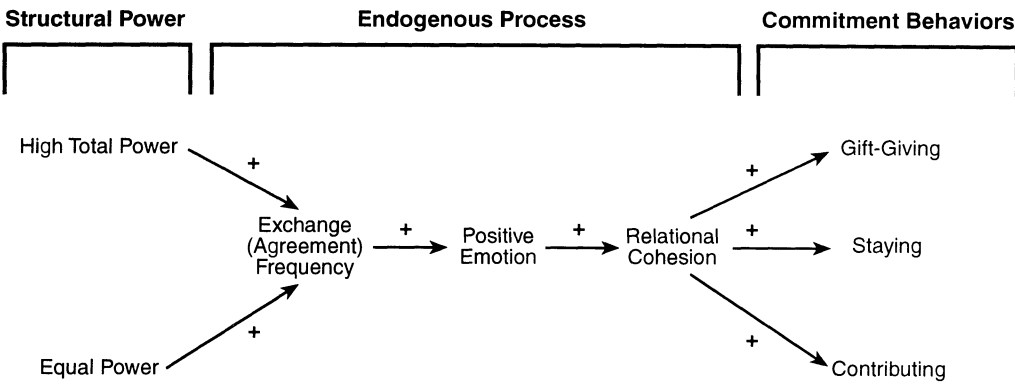


Figure 1. Theoretical Model for the Theory of Relational Cohesion

a joint function varying (1) directly with the value of the outcomes or rewards controlled by B ( $V_{ab}$ ) and (2) inversely with the availability of  $V_{ab}$  from A's alternative sources ( $ALT_a$ ) as follows:

$$P_{ab} = D_{ba} = V_{ba} / ALT_b \geq 1; \tag{1a}$$

$$P_{ba} = D_{ab} = V_{ab} / ALT_a \geq 1. \tag{1b}$$

The value of power or dependence is greater than 1, because the theory stipulates that each actor benefits more from exchanges in the focal relation than in alternative ones.

A power-dependence approach is useful for understanding both cohesive and divisive tendencies in a social structure because it adopts a nonzero-sum conception of structural power (Bacharach and Lawler 1981; Lawler 1992b; Lawler and Ford 1993). A zero-sum conception indicates an inverse relation between actors' power capabilities—an increase in A's power by definition entails a decrease in B's. The focus in a zero-sum conception is on the differentiating, coercive, and divisive effects of a power capability (Kanter 1972). A nonzero-sum conception is an important theoretical shift because it allows the total or average power in a relation to vary, and therefore, actors in a relation can both gain or lose power simultaneously. For example, the dependence on each other (mutual or "total" dependence) can increase or decrease; Emerson (1972:63) refers to increased mutual dependence as a "cohesion" effect of the power-dependence relation. A similar idea is implied by Thibaut and Kelley's (1959; Kelley and Thibaut 1978) concept of "mutual fate control," which they define as the degree of control each has over

the other's outcomes, regardless of the other's behavior.

Given each party's power or dependence in the relation, relative power ( $RP$ ) is defined as the ratio of high power to low power, and total power ( $TP$ ) is the sum of A's and B's power (Bacharach and Lawler 1981; Molm 1987, 1990; Lawler 1992b). In this paper, as in previous work on exchange networks (e.g., Cook et al. 1983; Markovsky, Willer, and Patton 1988), the alternatives are the sources of power.

$$RP = P_{ab} / P_{ba} \text{ or } D_{ba} / D_{ab} \geq 1, \\ \text{where } P_{ab} \geq P_{ba} \text{ or } D_{ba} \geq D_{ab}; \tag{2}$$

$$TP = P_{ab} + P_{ba} \text{ or } D_{ba} + D_{ab} \geq 2. \tag{3}$$

Thus, a nonzero-sum conception of power suggests that the relative power in a dyad and the total or average power across actors are two distinct dimensions of structural power. Changes in total power can occur while the relative power of two actors remains constant, and changes of relative power can occur without changing the total power in the relation. Both the total (mutual) dependence and relative dependence in an exchange relation are potential sources of cohesion in the dyad. The concept of "structural cohesion" is a way to integrate the effects of relative and total power dependence.

We define *structural cohesion* as the structural potential for instrumental cooperation in an exchange relation. Instrumental cooperation exists in an exchange relation when each actor is likely to benefit more from a negotiated exchange in the focal relation than from an alternative exchange relation (Pruitt



and Kimmel 1977). In negotiated exchanges, the behavioral consequences of greater structural cohesion are more concessions, fewer hostile tactics, and more negotiated agreements. Structural cohesion parsimoniously captures the combined (additive) and joint (interactive) effects of the two structural-power dimensions—relative power and total power:

Axiom 1:

$$\text{Structural Cohesion (SC)} = SC [(TP/RP)^{1/2}]. \quad (4)$$

To derive the implications of this formulation, Axiom 1 is reformulated as follows:

$$\text{Structural Cohesion (SC)} = SC (TP, RP, TP \times RP). \quad (5)$$

$$SC_T > 0; \quad (5a)$$

$$SC_{TT} < 0; \quad (5b)$$

$$SC_R < 0; \quad (5c)$$

$$SC_{RR} > 0; \quad (5d)$$

$$SC_{TR} < 0; \quad (5e)$$

where  $SC_T$  and  $SC_{TT}$  refer to the first and second partial derivatives of structural cohesion (SC) with respect to total power,  $SC_R$  and  $SC_{RR}$  to the first and second partial derivatives with respect to relative power, and  $SC_{TR}$  refers to the multiplicative effect of relative and total power. (The proof for these derivations is available from the authors.)

The set of partial derivatives describes how relative and total power induce varying degrees of structural cohesion. Structural cohesion is a positive function of total power ( $SC_T > 0$ ), and it increases at a decreasing rate ( $SC_{TT} < 0$ ); structural cohesion is a negative function of unequal power ( $SC_R < 0$ ); a unit change of relative power has a smaller negative effect on structural cohesion as power inequality increases ( $SC_{RR} > 0$ ). Given that higher values of relative power mean greater power inequality, the joint effect ( $SC_{TR} < 0$ ) indicates that increases in total power produce larger increments of structural cohesion under lower power inequalities, and that greater power equality increases structural cohesion more when total power is greater.

Focusing on the linear relations of power to structural cohesion (i.e., first partial derivatives), the positive impact of total power on structural cohesion ( $SC_T > 0$ ) captures the point that greater total power or mutual dependence in a dyad increases the opportunity costs of leaving the focal relation. Higher total power gives actors more flexibility to adapt and more room for misperception or miscalculation because a larger number and range of agreements meet a “sufficiency” criterion; that is, the agreements give both actors more benefit than would be gained from their respective alternatives. The negative relation of unequal power to structural cohesion ( $SC_R < 0$ ) is consistent with the point that power inequalities often complicate the bargaining agenda by raising fairness issues. Those with power advantages tend to argue for agreements that favor themselves; whereas, disadvantaged actors tend to argue for agreements that equalize benefits (Bacharach and Lawler 1981; Hegtvedt and Cook 1987). The joint impact of relative and total power ( $SC_{TR} < 0$ ) indicates further that high total power and equal power create an extra push toward structural cohesion. In combination, the greater flexibility provided by high total power and the prominent fairness principle (i.e., equal payoffs) provided by equal power should have a positive multiplicative effect on structural cohesion.

Axiom 1 and its derivations (equations 5 and 5a to 5e) can be applied to studies on negotiation behavior, such as concessions and punitive tactics, as well as to studies on exchange frequency and the nature of exchange. Greater structural cohesion implies that members of a given dyad will more successfully negotiate exchanges when they each have something the other wants. Such effects for total power (mutual dependence) and for equal versus unequal power have been observed in some previous research (Lawler and Yoon 1993; Lawler et al. 1995), but the possibility of an interaction effect has not been tested.

### The Endogenous Process

High structural cohesion (SC) provides more structural opportunities for actors to develop a cohesive relation, but whether actors “realize” the structural cohesion depends on their

actions in negotiations. Thus, even when high structural cohesion exists, a cohesive relation can develop only if actors act on that structural cohesion. We define *relational cohesion* ( $RC$ ) as the degree to which actors *perceive* their relation to be a distinct, unifying social object. Axiom 2 specifies the process by which actors react to the structural opportunities and develop varying degrees of relational cohesion:

Axiom 2:

$$\text{Relational Cohesion } (RC) = RC[E\{F(SC)\}]. \quad (6)$$

$$F_{SC} > 0; \quad (6a)$$

$$E_F > 0; \quad (6b)$$

$$RC_E > 0; \quad (6c)$$

where  $E$  refers to positive emotion and  $F$  refers to exchange frequency.

The first partial derivatives indicate that relational cohesion is a positive linear function of positive emotion ( $RC_E > 0$ ), positive emotion is a positive linear function of exchange frequency ( $E_F > 0$ ), and exchange frequency is a positive linear function of structural cohesion ( $F_{SC} > 0$ ). The main point here is that these positive relations are connected through a "chain," such that structural cohesion ( $SC$ ) directly affects exchange frequency ( $F$ ) which in turn produces positive emotion ( $E$ ), which then generates relational cohesion ( $RC$ ). This chain excludes direct effects between any two theoretical constructs beyond the paths specified in the axiom (also see Figure 1).

### Predictions

The main part of the theoretical model (Figure 1) is derived from a simple syllogism combining derivations from the structural-cohesion axiom (equations 5, 5a, 5c, and 5e) and the relational-cohesion axiom (equations 6, 6a, 6b, and 6c) as follows:

$$\text{Relational Cohesion } (RC) = RC[E\{F(TP, RP, TP \times RP)\}]. \quad (7)$$

$$F_{TP} > 0; \quad (7a)$$

$$F_{RP} < 0; \quad (7b)$$

$$F_{TR} < 0; \quad (7c)$$

$$E_F > 0; \quad (7d)$$

$$RC_E > 0. \quad (7e)$$

Each equation is a prediction for one path in the theoretical model, from exchange frequency through relational cohesion. The rationale for the link from exchange frequency to relational cohesion is detailed below.

**Effects of exchange frequency on emotions.** Negotiations take place in the context of uncertainty and ambiguity about each other's constraints, orientations, and intentions. Reaching an agreement, therefore, is a joint accomplishment that should make participants feel good (Lawler and Yoon 1993). In fact, the uncertainty inherent in most negotiation settings should render the "emotional buzz" from frequent agreements more clearly felt and easily reported. *Emotion* is defined as a relatively short-term positive or negative evaluative state that involves neurophysiological, neuromuscular, and sometimes cognitive features (Kemper 1978; Izard 1991). The theory of relational cohesion focuses on mild emotions—everyday experiences like feeling happy, unhappy, elated, sad, excited, bored, or enthusiastic.

The circumplex model along with some recent sociological theorizing about emotions provides a useful approach to mild emotions that is relevant to negotiated exchange (Kemper 1978; Watson and Tellegen 1985; Larsen and Diener 1992). In the circumplex model, *pleasure* and *arousal* are the primary dimensions of emotion, and most other emotions can be categorized as combinations of these. The arousal dimension is problematic, however, because it is vague and can be either negative or positive (Larsen and Diener 1992). Thus, based on Izard (1991), we treat "interest/excitement" as a positive form of arousal that is distinguishable from pleasure; interest/excitement is a motivational *state* of curiosity and fascination (Izard 1991; Mandler 1975), whereas pleasure is a *feeling* of gratification or satisfaction. Interest/excitement is "feeling energized"; pleasure is "feeling satisfied." Interest/excitement is *based on an expectation of future rewards*, while pleasure/satisfaction is *based on rewards received* (Izard 1991).

Extrapolating from Izard (1991), one would predict stronger effects for interest/excitement than for pleasure/satisfaction if fre-

quent exchanges induce an orientation to the future or to anticipated outcomes ("looking forward"); stronger effects for pleasure/satisfaction would be predicted if frequent exchanges foster an orientation to the past or outcomes in hand ("looking backward"). Actors in a negotiated exchange may look either forward or backward, as Macy (1993) has recently suggested, and our previous results (Lawler and Yoon 1993) suggest that interest/excitement mediates the impact of exchange frequency on commitment more than does pleasure/satisfaction. In our earlier study, interest/excitement was a function of exchange frequency, whereas pleasure/satisfaction was a function of the nature of exchange or the payoffs from it. In this study, we explore whether each of these emotions are important contributors to relational cohesion.

***From emotion to relational cohesion to commitment.*** According to the theory of relational cohesion, the impact of emotion on commitment behavior is mediated by relational cohesion, implying that actors perceive the relation itself as an external, causal force. The basis for this prediction is that people want to reproduce the positive feelings associated with exchange, and therefore they try to understand or interpret the source of those feelings. The emerging exchange relation is likely to be a part of that interpretation; that is, the actors will attribute the positive emotions in part to their relationship with each other. In this sense, the emotions experienced individually are interpreted by actors as coming from something they share. The stronger the positive emotions produced by frequent exchanges, the more salient the exchange relation will become as a target of attachment and commitment (Lawler 1992a; Lawler and Yoon 1993). People who think their relation has unifying or integrating qualities are likely to trust each other more, anticipate relatively cooperative exchanges, invest more in their relation, and be willing to take risks or suffer costs to maintain the relation.

Relational cohesion is similar to the "objectification" of the exchange relation—the perception of it as an objective reality (Berger and Luckmann 1966). Essentially, it involves incipient "psychological group formation" or "social categorization"—actors de-

fine their relation as distinctive or "set off" from other relations in the situation (Tajfel and Turner 1986). Our theory holds that as an exchange relation becomes an objective reality for actors, it exerts a subtle, positive force of its own, and a dose of expressiveness is added to the instrumental foundation of the exchange relation. This emotional/expressive emphasis represents a key difference between our theory and related analyses by Berger and Luckmann (1966) and Tajfel and Turner (1986).

The "expressiveness" of the relation is distinct from the liking or interpersonal attraction of the actors for each other (Parsons 1951; Hogg and Turner 1985; Lawler 1992a; Markovsky and Lawler 1994). Both the other actor and the exchange relation itself can be distinct social objects, just as the "generalized other" and "specific others" are distinct objects in Mead's theory (Mead 1934), and the "organization" is a distinct object of attachment in research on organizational commitment (Meyer et al. 1990). In fact, Hogg and Turner (1985) provide evidence that interpersonal attraction is neither necessary nor sufficient for group formation. We infer that instrumentally based exchange relations, created and maintained by structural-power conditions, could become targets of affective attachment, regardless of whether the particular actors like each other.

To conclude, the theory of relational cohesion predicts that different forms of commitment behavior are produced through the same emotional/affective process. Relational cohesion can add intrinsic and/or expressive benefits to exchanges in a focal dyadic relation, thus increasing stay behavior; it also can make gift-giving symbolic of joint accomplishments; and it can lead both actors to perceive the relation as an emerging normative constraint, which should mitigate the "mutual assurance" problem in a social-dilemma choice.

## METHOD

### *Design and Subjects*

This study includes three experiments, each one tied to a different form of commitment behavior (i.e., gift-giving, staying, and contributing). Each experiment created the same



power conditions. Subjects engaged in 12 *episodes* of two-party negotiations (Pruitt and Kimmel 1977; Lawler and Bacharach 1987; Lawler and Yoon 1993). Each negotiation episode could involve several *rounds* of offers and counteroffers. The maximum number of rounds per episode differed in each experiment—there were three rounds per episode in the gift-giving experiment, four rounds in the stay-behavior experiment, and five rounds in the contribution experiment. This allowed us to explore whether structural-power effects are sensitive to the number of rounds available for agreement. Subjects were provided with opportunities to engage in one of the commitment behaviors during the last one-third of each experimental session, after the incipient exchange relation had a chance to form.

Each experiment employed the same  $2 \times 2$  factorial design, manipulating relative power (equal versus unequal) and total power (high versus low) in the dyad. Subjects were undergraduate students at a large mid-western university, recruited as paid volunteers. A total of 480 subjects participated in the experiments. In each of these experiments, 80 dyads (40 male dyads and 40 female dyads) were randomly assigned to one of the four experimental conditions (20 dyads per cell).<sup>2</sup>

### Procedures

Subjects took a seat in separate rooms and read written instructions explaining that they would bargain anonymously with a person in the next room. One subject represented a company called Alpha and was attempting to buy iron ore; the other subject represented a

company called Beta and was attempting to sell iron ore. As the instructions explained, the two companies had engaged in preliminary discussions, and their initial offers were quite far apart. Alpha's representative had offered a price of 1 cent per unit, while Beta's representative had asked for 25 cents per unit. In light of this gap, both subjects were to negotiate on behalf of their company's interests (i.e., Alpha was to negotiate for as low a price as possible, and Beta for as high a price as possible).

Subjects' "pay" depended on the agreements they reached with each other or with an alternative company. Subjects had information only on their own profit, stated in terms of points; they did not have exact information on their negotiation partner's profit at each price level, which is consistent with related works (Lawler and Bacharach 1987; Lawler, Ford, and Blegen 1988; Lawler and Yoon 1993). In fact, there was an inverse relationship between Alpha's profits and Beta's profits over the 25 possible agreement prices.

The instructions explained that the study would include up to 15 episodes of negotiation, with one negotiation representing one episode. In fact, the experimental session ended after 12 episodes. The instructions also informed subjects that each negotiation was separate and independent, because the price set in one episode had no formal bearing on price in subsequent episodes. In each episode the two groups negotiated anew. If an agreement was not reached in a given episode, the price paid by Alpha or received by Beta was determined by an agreement with an alternative supplier or buyer. The alternative was a simulated other with whom subjects did not actually negotiate. Profits from the alternative supplier/buyer were based on a random drawing with known probabilities for various profit levels.

Subjects bargained with each other via computers. One round consisted of one offer by each party. When making an offer, subjects had three options: (1) repeat their last offer, (2) accept the last offer made by the other, or (3) make a counteroffer (i.e., concession). They had to confine offers to one of the 25 price levels (from 1 cent to 25 cents), and once made, an offer could not be retracted.

<sup>2</sup> Subjects were randomly assigned to one of the four conditions in each experiment, but they were not randomly assigned to experiment because the three separate experiments were conducted during different semesters. The standardization across experiments in virtually every other aspect, including the methods of recruiting subjects, makes it plausible to interpret the experiments in terms of the number of rounds available for agreement. However, other unknown differences may be associated with the experimental variable, and thus, a lack of effects for experiment is more easily interpretable than effects.

### *Experimental Manipulations*

We manipulated power dependence by varying the probabilities of profits from agreements with the alternative (for similar procedures, see Bacharach and Lawler 1981; Lawler and Bacharach 1987; Lawler and Yoon 1993). Subjects were given an "alternative negotiation sheet" that showed the actual probabilities of different profits they could earn from the alternative. Each actor had knowledge of their own alternative and the other's alternative. For all power conditions, the expected profit from an agreement with the alternative was lower than the expected profit from the optimal or midpoint agreement in the focal dyad, which was set at 120 points.

The manipulations took the form of a simple probability distribution. In the equal power condition, each subject in a dyad had the same probability distribution for points from the alternative. Under high total power, they both had a 1 percent chance of getting 120 points, a 4 percent chance of 100 points, a 15 percent chance of 80 points, a 60 percent chance of 60 points, a 15 percent chance of 40 points, a 4 percent chance of 20 points, and a 1 percent chance of 0 points. Thus, the expected value (profit) from the alternative was 60 points. Under low total power, the expected value (profit) from the alternative was higher (80 points), as each subject was offered an alternative with a 1 percent chance of 140 points, a 4 percent chance of 120 points, a 15 percent chance of 100 points, a 60 percent chance of 80 points, a 15 percent chance of 60 points, a 4 percent chance of 40 points, and a 1 percent chance of 20 points.

Comparable probability distributions manipulated unequal power. For the unequal-power conditions, the expected value (profit) of the alternative was 75 points for the high-power actor and 50 points for the low-power actor under high total power; the expected value (profit) was 100 points for the high-power actor and 65 points for the low-power actor under low total power. Given that relative power was defined as a ratio, these manipulations provided virtually the same unequal power ratio for both high and low total power conditions ( $RP = 75/50 = 100/65 \cong 1.5$ ). The equal and unequal power conditions within each total power condition had

the same degree of total power (high  $TP = 120/60 + 120/60 = 120/75 + 120/50 = 4$ ; low  $TP = 120/80 + 120/80 = 120/65 + 120/100 \cong 3$ ). Low total power means less mutual dependence because they have better alternatives.

### *Dependent Measures*

All dependent variables were measured at the dyad level. The first experiment dealt with staying behavior, the second with gift-giving, and the third with making contributions in a social dilemma. A sentence at the end of the instructions indicated that later in negotiations, the profits from the alternative will change (stay behavior experiment), or the subjects have the option of giving gifts (gift-giving experiment), or they have the option of contributing some of their individual resources to a joint venture. Further instructions, given to subjects between the eighth and ninth negotiation episodes, explained these options.<sup>3</sup>

**Stay behavior (Experiment 1).** To measure stay behavior, the instructions between eighth and ninth negotiation informed subjects of changes in the payoffs from their alternative negotiations, indicating an increase in the expected profit. In one-half the dyads, the expected profit from the alternative became 120 points, and in the other half it became 110 points. We included both levels because our earlier study showed very low absolute rates of staying behavior in negotiated exchange (Lawler and Yoon 1993), and we wanted to design a measure to be sensitive to the subtle variations in attachment likely to occur in such an instrumentally-oriented context. Given that the expected profit from the focal relation was 120 points, the focal relation still offers equal or slightly bet-

<sup>3</sup> The mention of the options in the initial instructions was designed to prevent later instructions from being a surprise. Pretesting in this and earlier work (Lawler and Yoon 1993) did not show any indication that these procedures produced a "mental set" favorable to the particular form of commitment behavior. We cannot rule out the possibility, however, that simply mentioning such options could increase the grand mean for commitment behavior, but there is no reason to suspect that this could be correlated with the exogenous power conditions.

ter profits than the alternative, which is consistent with the scope conditions of the theory. The total number of agreements across these last four negotiation episodes (episodes 9 through 12) constituted our measure for stay behavior (range 0 to 4).<sup>4</sup>

**Gift behavior (Experiment 2).** To measure gift behavior, the instructions portrayed gifts as exemplified by providing a person candy, flowers, or a card to acknowledge a relationship and stated: "Gifts allow you a way to express how you feel about your relationship to the other." Gifts were made by completing a form at the end of each bargaining episode during episodes 9 through 12. The form served as a voucher that subjects could exchange for pieces of candy after the experiment. If subjects did not send a gift, they could keep the voucher for themselves. Importantly, the instructions indicated that they would not know if the other gave them gifts until the experiment was over. This removed the possibility of subjects treating gifts as an explicit exchange. The total number of times both subjects gave gifts in negotiation episodes 9 through 12 is our measure for gift-giving; it could range from 0 to 4.

**Contribution behavior (Experiment 3).** To measure contribution behavior, the instructions indicated that after each negotiation both actors had the chance to contribute a fixed amount of their individual resources (40 points) to a joint account co-owned by both subjects. All the profits would be divided equally. When both parties contributed, each received a net profit of 20 points; when both did not contribute, they received no gain or loss; when one party contributed and other didn't, the noncontributor received 30 points and the contributor lost 10 points. This was a "decomposed" prisoner's dilemma game (Rapoport and Chammah 1965), but unlike most repeated games, subjects did not know the results (i.e., whether the other contributed) until the experiment was completed. The total number of mutual contributions in the last four episodes constituted our measure of contribution behavior; like the other commitment measures, it ranged from 0 to 4.<sup>5</sup>

<sup>4</sup> Separate analyses of stay behavior under the 120 versus 110 points conditions yielded the same basic results, and we combine these conditions in the analysis (mean = 1.47; S.D. = 1.09).

<sup>5</sup> The measures of "mutual" gift-giving and

### Common Variables

The three experiments shared the same measures for the endogenous variables—agreement (exchange) frequency, positive emotion, and relational cohesion.

**Agreement frequency.** *Agreement frequency* was measured as the proportion of negotiation episodes in which the focal negotiations yielded agreement. We analyzed agreement frequency across the first four episodes of bargaining (mean = .593; S.D. = .239) and across the second four episodes (mean = .646; S.D. = .254).

**Positive emotion.** After episodes 4 and 8, subjects reported their feelings about the negotiations using a series of 9-point bipolar adjectives. Factor analyses yielded two dimensions, which correspond to pleasure/satisfaction and interest/excitement (Izard 1991), suggesting that in our context, this distinction is reasonable (Lawler and Yoon 1993). The *pleasure/satisfaction* index summed reports for five items: pleased/displeased, happy/unhappy, satisfied/not satisfied, contented/discontented, and joyful/not joyful. *Interest/excitement* was measured by the sum of reports for enthusiastic/unenthusiastic, excited/bored, energetic/tired, motivated/unmotivated, and interested/not interested. Scores for the dyad were the sums of individual subjects' scores (after episode 4, means = 5.3 and 6.3, Cronbach  $\alpha$  = .88 and .85 for pleasure/satisfaction and interest/excitement respectively; after episode 8, means = 5.5 and 6.3, Cronbach  $\alpha$  = .95 and .92).

**Relational cohesion.** To measure relational cohesion, the questionnaire administered after episode 8 asked: "Think about the relationship you and the other have in the negotiations so far. How would you describe the RELATIONSHIP on each of the follow-

contribution behavior capture the dyadic level of analysis similar to stay behavior, but the distributions are skewed (for mutual gift-giving, mean = .95, S.D. = 1.00; for mutual contributions, mean = 1.07, S.D. = 1.31). Another possible measure is the sum (total) of gifts or contribution behaviors across individuals during episodes 9 to 12; these measures have more normal distributions (mean = 3.98, S.D. = 2.15 for contributions; mean = 3.91, S.D. = 1.61 for gift-giving). However, the results for "mutual" and "total" measures are virtually the same, and we prefer the mutual measures on theoretical grounds.

Table 1. Standardized OLS Coefficients for Regression of Agreement Frequency on Independent Variables

Independent Variable	Agreement Frequency			
	Model 1 First Four Episodes	Model 2 Second Four Episodes	Model 3 First Eight Episodes	Model 4 First Eight Episodes without Interaction Term
Equal power	.139* (.163)	.146* (.043)	.182* (.032)	.195*** (.022)
High total power	.201** (.163)	.236** (.043)	.278*** (.032)	.292*** (.022)
Four round	.272*** (.353)	.000 (.038)	.166** (.028)	.166*** (.027)
Five round	.333*** (.353)	.132* (.038)	.291*** (.028)	.291*** (.027)
Relative power × total power	-.037 (.057)	.070 (.062)	.023 (.045)	—
R <sup>2</sup>	.141	.131	.187	.187
Number of dyads	240	240	240	240

Note: Numbers in parentheses are standard errors. Equal power, high total power, four round, and five round are dummy variables; omitted categories are unequal power, low total power, and three round, respectively.

\*  $p < .05$     \*\*  $p < .01$     \*\*\*  $p < .001$  (one-tailed tests)

ing?” The nine-point bipolar adjectives were close/distant, cooperative/conflictual, integrating/fragmenting, solid/fragile, divisive/cohesive, converging/diverging, and team oriented/self oriented. The average of each actor’s individual score was our measure for relational cohesion (mean = 5.06; Cronbach  $\alpha = .91$ ).

RESULTS

Our theoretical model predicts a series of indirect paths through which structural power affects commitment behavior (see Figure 1). We test each prediction (path) in the theoretical model using ordinary-least-squares regression. Antecedent variables in the model are controlled while testing each specific path. Note that indirect effects, rather than direct effects, constitute support for the theoretical model. For analyses of all but the last link in the theoretical model, the experiments are combined, and the maximum number of rounds per episode (3, 4, or 5) is an additional exogenous variable. The number of rounds per episode is represented as two dummy variables omitting the 3-round category (gift behavior)—one for the four-round

category (stay behavior) and one for the five-round case (contribution behavior). Recall that other than the difference in number of rounds and the mention of the later options in the initial instructions, these experiments are virtually identical until episodes 9 through 12.

Structural Power and Exchange Frequency

We predicted that both higher total power and more equal power promote more frequent agreement (exchange), and the combination of the two should produce a multiplicative effect. Three models tested these predictions, one model each for the first four, second four, and first eight negotiation episodes. The results are identical across these analyses (see Table 1). In accord with the theory, these three models show that higher total power produced more frequent agreements ( $\beta = .201, .236$ , and  $.278$ ;  $p < .01, .01$ , and  $.001$ ); and equal, compared to unequal power, also produced more frequent agreements ( $\beta = .139, .146$ , and  $.182$ ;  $p < .05$  for all). The interaction effect of relative power and total power is not significant. Thus, the effects for total power (mutual dependence)

**Table 2. Standardized OLS Coefficients for Regression of Two Positive Emotions on Independent Variables**

Independent Variable	Positive Emotions			
	First Four Episodes		First Eight Episodes	
	Pleasure/ Satisfaction	Interest/ Excitement	Pleasure/ Satisfaction	Interest/ Excitement
Equal power	.032 (.111)	.077 (.109)	.047 (.145)	.073 (.123)
High total power	-.175*** (.112)	-.071 (.110)	-.116* (.149)	-.051 (.126)
Four round	-.175** (.140)	-.209** (.137)	-.189** (.176)	-.202** (.149)
Five round	-.041 (.142)	-.210** (.139)	-.043 (.180)	-.198** (.153)
Agreement frequency	.540*** (.251)	.240*** (.246)	.460*** (.405)	.285*** (.344)
R <sup>2</sup>	.290	.080	.222	.103
Number of dyads	240	240	240	240

*Note:* Numbers in parentheses are standard errors. Equal power, high total power, four round, and five round are dummy variables; omitted categories are unequal power, low total power, and three round, respectively.

\* $p < .05$     \*\* $p < .01$     \*\*\* $p < .001$  (one-tailed tests)

and relative power (equal versus unequal dependence) are additive, not multiplicative. In subsequent analyses, we drop the interaction term for the power conditions as none of the results change when it is included.

The number of rounds available for negotiation also revealed a positive effect on the frequency of exchange across all rounds (Model 3). Specifically, the coefficients for the first eight episodes reveal significant effects for the three versus four rounds ( $\beta = .166$ ,  $p < .001$ ) and three versus five rounds ( $\beta = .291$ ,  $p < .001$ ; means = .56, .63, and .68, respectively); a direct comparison of four versus five rounds indicates a marginally significant difference ( $t = 1.72$  (two-tailed test),  $p < .09$ ). However, the results are stronger in the first four than in the second four negotiation episodes ( $\beta = .272$  versus .000 and .333 versus .132); the impact of number of rounds is substantially reduced with additional negotiation episodes. Importantly, the effects of total and relative power are not contingent on or affected by the maximum number of negotiation rounds available to actors.<sup>6</sup>

<sup>6</sup> We also conducted analyses of variance, including gender, for the variables that are common

### *Exchange Frequency and Positive Emotion*

According to the theory of relational cohesion, the positive effects of total power and equal power on emotion should operate indirectly through the frequency of exchange (agreements). When positive emotion is regressed on power and exchange frequency, there should be a positive effect for exchange frequency and no positive direct effects for power. Table 2 presents the results of separate regressions for each of the two emotions (pleasure/satisfaction and interest/excitement) after the fourth and eighth episodes of negotiation. We regress the time 1 measures (after four episodes) on agreement frequency for the first four episodes and time 2 mea-

asures across the three experiments. There were no significant gender main effects and no interactions by power conditions in the combined data set. The only significant effect was an interaction of round  $\times$  gender on agreement frequency ( $p < .05$  for the first four episodes and  $p < .01$  for the second four episodes). Interpreting this effect is problematic, given that round is confounded with experiment. The key point, however, is that neither round nor gender qualify the effects of structural power on exchange frequency.



tures (after eight episodes) on the first eight episodes.

The results of these analyses provide strong and consistent support for the theory. First, in each equation, as predicted, more frequent agreements produce more positive emotion, and in fact, these are the strongest coefficients. Second, there are no positive direct effects of equal power or total power on emotion, and none were predicted. Negative direct effects for total power suggest that if higher mutual dependence does not produce more frequent agreements, the result is less pleasure/satisfaction. Similar negative direct effects for equal power were revealed in a previous study (Lawler and Yoon 1993), but these are not replicated here. Third, as predicted, in this study both positive emotions—pleasure/satisfaction and interest/excitement—are enhanced by more frequent agreements. The effects for pleasure/satisfaction are stronger than the effects for interest/excitement ( $\beta = .540$  versus  $.240$  after the fourth episode of negotiation;  $\beta = .460$  versus  $.285$  after the eighth episode).<sup>7</sup>

The findings for number of rounds are complex and difficult to interpret. For the direct effects in Table 2, all the signs are negative, and six of eight are statistically significant. Combining these results with those in Table 1, it is clear that there is a positive indirect effect for number of rounds on emotion that operates through agreement frequency and smaller (negative) direct effects. The direct effects may reflect a “downhearted” or negative emotional response to failures to agree when more rounds are available. Overall, these results must be interpreted cautiously (see note 2).

### Positive Emotion and Relational Cohesion

The next path in the theoretical model predicts that positive emotion will generate relational cohesion (i.e., the perception of the relation as a unit). Once again, the theory also specifies that no positive direct effects

<sup>7</sup> Previous studies have yielded somewhat different results regarding which dimension of positive emotion is most important. Our earlier study (Lawler and Yoon 1993) finds that interest/excitement is more important to the effects of *relative* power than to pleasure/satisfaction; and

**Table 3. Standardized OLS Coefficients for Regression of Relational Cohesion on Independent Variables**

Independent Variable	Relational Cohesion		
	Model 1	Model 2	Model 3
Equal power	.014 (.099)	.014 (.106)	.011 (.099)
High total power	-.004 (.102)	-.040 (.108)	-.006 (.130)
Four round	-.068 (.122)	-.093 (.130)	-.063 (.123)
Five round	-.065 (.123)	-.027 (.133)	-.054 (.125)
Agreement frequency	.344*** (.306)	.436*** (.305)	.345*** (.306)
Pleasure/satisfaction	.436*** (.044)	—	.395*** (.056)
Interest/excitement	—	.285*** (.055)	.062 (.066)
R <sup>2</sup>	.434	.359	.436
Number of dyads	240	240	240

*Note:* Numbers in parentheses are standard errors. Equal power, high total power, four round, and five round are dummy variables; omitted categories are unequal power, low total power, and three round, respectively.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$  (one-tailed tests)

will occur when all antecedent variables are controlled. An analysis regressing relational cohesion on each positive emotion and on the antecedent variables (power, number of rounds, exchange frequency) yields support for the predicted link between emotion and relational cohesion (see Table 3).<sup>8</sup>

As predicted, positive emotion has a positive effect on the perception of the exchange

Lawler et al. (1995) find the reverse for the effects of *total* power. In the present study, which simultaneously addresses both dimensions of power, both emotions are important.

<sup>8</sup> The theory justifies the causal order of positive emotion → relational cohesion, but both emotion and relational cohesion were measured on the same questionnaire (after the eighth negotiation episode). Thus, we reestimated these equations, using the measures of positive emotion after the fourth episode. The results are virtually identical. Only pleasure/satisfaction had a significant effect ( $\beta = .197$ ,  $p < .01$ ).

relation as an objectified unit. Each emotion singly has the same effect, although the effect for pleasure/satisfaction is stronger than the effect for interest/excitement ( $\beta = .436$  versus  $.285$ ); and with both emotions in the model, only pleasure/satisfaction has a significant effect ( $\beta = .395$ ,  $p < .001$ ). Thus, while there is evidence that both emotions have the same sort of impact on relational cohesion, pleasure/satisfaction emerges as more important.<sup>9</sup>

The results also reveal an unpredicted finding, a direct effect of agreement frequency on relational cohesion ( $\beta = .344$ ,  $.436$ , and  $.345$  for Models 1, 2, and 3, respectively; all  $p < .001$ ). Given that the theory emphasizes the *indirect* effects of power and agreement frequency operating through emotional/affective processes, this unexpected finding is important. It suggests that the emotional/affective process, posited by our theory, is not the only process affecting the development of relational cohesion. Perhaps an uncertainty-reduction process is also operating (e.g., see Williamson 1981; Cook and Emerson 1984).

To examine this possibility, we constructed a measure of the "predictability of the focal relation" from four sets of polar adjectives that were included on the questionnaire. These items asked subjects to characterize their relationship to each other, and included unpredictable-predictable, vague-clear, uncertain-certain, and unstable-stable (Cronbach's  $\alpha = .74$ ). As hypothesized by exchange theory (Cook and Emerson 1984), the regression of perceived predictability on agreement frequency with exogenous variables controlled yielded a significant positive

**Table 4. Standardized OLS Coefficients for Regression of Commitment Behavior on Independent Variables**

Independent Variable	Commitment Behavior		
	Staying	Gift-Giving	Contributing
Equal power	-.159 (.228)	.046 (.215)	.111 (.313)
High total power	-.140 (.224)	.133 (.217)	.000 (.325)
Agreement frequency	.260* (.768)	.041 (.606)	.027 (1.20)
Pleasure/satisfaction	-.245 (.129)	.158 (.118)	-.115 (.250)
Interest/excitement	-.159 (.136)	-.111 (.143)	-.124 (.238)
Relational cohesion	.560*** (.160)	.348** (.136)	.239* (.201)
R <sup>2</sup>	.294	.215	.069
Number of dyads	80	80	80

*Note:* Numbers in parentheses are standard errors. Equal power, high total power, four round, and five round are dummy variables; omitted categories are unequal power, low total power, and three round, respectively.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$  (one-tailed tests)

effect ( $\beta = .39$ ,  $p < .001$ ). More frequent agreement generated perceptions of a more predictable exchange relation. Furthermore, the regression of relational cohesion on the two positive emotions, perceived predictability and agreement frequency, revealed that the predictability of the relation had a strong positive effect on relational cohesion ( $\beta = .42$ ,  $p < .001$ ), as did pleasure/satisfaction ( $\beta = .33$ ,  $p < .001$ ).<sup>10</sup> Thus, there is evidence that both uncertainty-reduction and emotional/affective processes mediate the impact of frequent agreement on relational cohesion. The positive side of these results for our theory is that, even when a measure for the predictability of the relation is included as a

<sup>9</sup> Confirmatory factor analysis tested whether the assumed theoretical distinctions between the two emotions and relational cohesion are justifiable empirically. The main alternative to our three-factor conceptualization is a two-factor model in which the emotions are combined into one factor and relational cohesion is the second factor; another possibility is a one-factor model that combines all three constructs. Confirmatory factor analyses show that the three-factor model, assumed by our theory, fits the data better than either the one-factor or two-factor models ( $\chi^2 = 214.9$ , d.f. = 116, GFI = .90 for the three-factor model;  $\chi^2 = 761.4$ , d.f. = 118, GFI = .53 for the two-factor model;  $\chi^2 = 1376.5$ , d.f. = 119, GFI = .31 for the one-factor model).

<sup>10</sup> Given the prospect of correlated error between perceived predictability and pleasure/satisfaction, we reestimated this equation with two-stage least squares, using the predicted values of predictability and pleasure/satisfaction. The impact of both remained statistically significant ( $\beta = .17$ ,  $p < .05$  for predictability;  $\beta = .37$ ,  $p < .001$  for pleasure/satisfaction).

control, emotion remains important to relational cohesion. Note also that there may be other yet unknown processes operating, because the direct effect of exchange frequency remains statistically significant ( $\beta = .23$ ).

### ***Relational Cohesion and Commitment Behavior***

The last step in testing the theory of relational cohesion is to examine the impact of relational cohesion on the three forms of commitment behavior—staying, gift-giving, and contributing. The theory suggests that the perception of the relation as an objectified unit is the basis for various forms of commitment behavior. We treat each experiment separately for this analysis (see Table 4).

The results lend striking support to the theory of relational cohesion. In fact, the results are the same for all three forms of commitment behavior—staying in the relation despite improved alternatives, giving token gifts unilaterally, and contributing to a joint venture that represents a two-actor social (prisoner's) dilemma. Specifically, the perception of a cohesive relation increases staying in the focal relation ( $\beta = .560, p < .001$ ),<sup>11</sup> gift-giving ( $\beta = .348, p < .01$ ), and the frequency of contributing to a joint venture with the focal other ( $\beta = .239, p < .05$ ). The only direct effect that remains across all three forms of commitment behavior is an impact of agreement frequency on stay behavior ( $\beta = .260, p < .05$ ). Thus, there is substantial support for the notion that relational cohesion is a proximal cause of commitment behavior, a point through which other structural, cognitive, and emotional processes tend to operate.

### ***Distribution of Profits from Agreements***

The theory examines exchange frequency in a context where agreements in the focal relation provide better profits than do those

from an alternative relation. The division of profits in the actual agreements, however, could involve varying degrees of inequality, which might affect the commitment process posited by the theory (Figure 1). Thus, we added a measure of profit difference that averages the differences in profits across agreements made to subjects in the focal relation during the first eight sessions. The regression results indicated that (1) unequal power produced more unequal divisions of profit ( $\beta = .182, p < .01$ ), while total power had no effect; (2) more unequal divisions of profit produced less pleasure/satisfaction in the dyad ( $\beta = -.127, p < .05$ ) and less interest/excitement ( $\beta = -.155, p < .05$ ), net of the effects of agreement frequency; and (3) differences in profit neither altered nor qualified the direct effects of agreement frequency on emotion. Moreover, the results for relational cohesion and the three forms of commitment behavior are the same when the measure for profit difference is included as a control, affording additional credence to the theory.

## **DISCUSSION**

The theory of relational cohesion emphasizes the emotional/affective factors in commitment formation. The purpose is not to displace or contradict the uncertainty-reduction hypothesis, the current emphasis in exchange theory (see Cook and Emerson 1984; Kollock 1994), but to consider whether emotional/affective processes deserve a distinct role. We argue that if a network repeatedly brings the same two people together and the two accomplish a joint task they are likely to experience an “emotional buzz” involving mild feelings of satisfaction and/or excitement. These emotions are not solely a result of individual rewards produced by successful exchange, but result partly from successfully accomplishing a task jointly with another person. The emotions make the dyadic relation and, in particular, its unifying impact more salient and more real to the actors; this salience and reality is conceptualized as “relational cohesion,” and the prediction is that it leads to commitment behavior of various forms.

This study makes three theoretical contributions. First, it pulls together the implica-

<sup>11</sup> We compared the results of the 40 dyads for whom the alternative could provide 110 points with the 40 dyads for whom the alternative could provide 120 points. The effect of relational cohesion on stay behavior was stronger in the 110 point case than in the 120 point case ( $\beta = .66$  versus  $.59$ ;  $p < .001$  versus  $.05$ ), but no new direct effects emerged. Thus, the theoretical implication remains the same.

tions of a nonzero-sum concept of power. Previous analyses of the cohesive or integrative effects of power-dependence relations have focused solely on the total-power dimension—mutual dependence or interdependence (Emerson 1972; Bacharach and Lawler 1981; Lawler 1992b; Molm 1987, 1994). We conceptualized structural *cohesion* as the combined effects of total and relative power dependence. We predicted that greater structural cohesion, along either or both higher total power-dependence and more equal power-dependence, would generate more frequent agreement in a focal dyad. The results of our three experiments support the separate, additive effects of these two power dimensions, but not the multiplicative effect. This is sufficient to maintain the current formulation for structural cohesion, but the absence of evidence for a multiplicative effect suggests the need for further empirical work. One possibility is that the orthogonal manipulations in our experiments create rather small multiplicative increments in structural cohesion that are difficult to detect. Another possibility is that the additive effects are dominant, and the interactive effects show up only within particular ranges of total and relative power. In either case, “structural cohesion” serves as a useful conceptualization of the combined effects of relative and total power on conciliatory behavior in negotiated exchanges.

The second theoretical contribution this study makes is that relational cohesion, or “objectification of the exchange relation” (Berger and Luckmann 1966), helps explain how and why emotional processes foster commitment behavior. When people have a common focus and interact repeatedly, they come to sense that they are part of something larger—a relation, group, or organization. Durkheim (1915) explains this “sense” as primarily emotional, stressing the uplift or “effervescence” generated by joint activity (also see Collins 1981). Berger and Luckmann’s (1966) explanation relies on actors’ definitions or cognitive “typifications” of the *meaning* of their repetitive activity. Broadly, we show one way that these emotional and cognitive processes are intertwined in social exchange. The emotional uplift from joint activity fosters a sense of participating in something larger and an ef-

fort to interpret what the “something larger” is; if the exchange relation is part of this interpretation, the actors take account of and nurture that relation in their future interactions. In this way, the exchange relation becomes an expressive object of intrinsic value to the actors and a “third force” impinging on them.

The third contribution our study makes concerns the central role of emotion and affect in the commitment process. This point is actually strengthened by support for an uncertainty-reduction process. Frequent exchanges enhance relational cohesion through both positive feelings and perceptions of a predictable relation, and we infer that uncertainty-reduction helps to “set off” focal relations from alternative ones (Cook and Emerson 1978; Kollock 1994). Importantly, the uncertainty-reduction process is complementary to the emotional/affective process and does not “wash it out.” There is a distinct place for both in explanations of commitment to exchange relations.

We propose that the theory of relational cohesion be broadened to incorporate these complementary processes. The impact of exchange (agreement) frequency on commitment via uncertainty-reduction can be conceptualized as a “boundary defining” process, and the route through emotion can be seen as a “social bonding” process. The boundary-defining process sets the dyadic relation off from alternative relations and makes it appear more distinct to actors, while the social-bonding process transforms the relation into an “object” that is valuable in itself and a source of emergent informal constraints on malfeasance (Granovetter 1985: 490). The “boundary defining” process indicates that instrumental features of exchange, such as interdependencies (Rabbie and Horowitz 1988; Kramer 1991), promote “psychological group formation” in the dyad. The “social bonding” process indicates that the distinctiveness of the exchange relation makes it a target for attachment and commitment. The theory of relational cohesion should incorporate and test both of these processes in larger groups and networks.

Evidence in our studies for backward-looking (pleasure/satisfaction) and forward-looking (interest/excitement) emotions is mixed. Clearly, pleasure/satisfaction is more

important than interest/excitement here than in our previous study (Lawler and Yoon 1993). Nevertheless, it is important to continue to explore the roles of both because the distinction between backward-looking and forward-looking actors captures a fundamental difference between reinforcement (backward-looking) and rational choice (forward-looking) approaches to social exchange (Emerson 1981; Macy 1993). If indeed different emotions are experienced contingent on the temporal standpoint of the actor, this could have important implications for exchange theory. We propose a hypothesis based on a comparison of this research with our previous study (Lawler and Yoon 1993): *In ongoing exchange relations in which new, complex, and challenging problems continually emerge, interest/excitement will be the dominant form of positive emotion; in exchange relations in which the problems are less complex or challenging or are subject to routinized procedures, pleasure/satisfaction will be the dominant emotion.*

## CONCLUSIONS

In recent social-exchange frameworks, emotions are seen either as epiphenomenal by-products of reinforcements and punishments or are reduced to a cognitive phenomenon. However, the outpouring of recent research on the sociology of emotions offers a variety of ways to incorporate emotions and give them a more significant role in exchange theory. For example, expressions of emotion can convey trust (Frank 1988), claim or assert status (Clark 1990), or can increase power (Kemper 1978). Emotions that are felt, but not openly expressed, can signal a lack of correspondence between the events in an exchange and the identities of the actors (Smith-Lovin and Heise 1988), reveal norms for expressing emotion in a given context (Hochschild 1983), or help explain the emergence or decline of cohesion, commitment, and solidarity (Collins 1981). We focus mainly on cohesion and commitment, but one general message from this research is that emotional/affective processes contribute independently to an understanding of social exchange and warrant more explicit attention by exchange theorists (see Molm 1991 for some recent work).

A second general message of our research is that exchange networks are likely to contain endogenous processes that produce pockets of relational cohesion. Our research suggests that the emotional/affective and uncertainty-reduction effects of repetitive exchange are important aspects of this endogenous process. Thus, power capabilities derived from a larger network should produce relational cohesion in different locations and on different levels within complex networks as long as negotiated exchanges produce positive feelings and a sense of predictability in any given relation. Greater relational cohesion should make exchange relations more resilient and more difficult to break apart than is indicated by exchange-network theories (Cook et al. 1983; Markvosky et al. 1988; Skvoretz and Willer 1993), because of the immanent or emergent value of the exchange relation (Foa 1971; Tallman et al. 1991).

This emphasis on endogenous processes is also a key difference between our theory and rational-choice theory. A rational-choice approach would assume that pecuniary and nonpecuniary utilities are exogenously imposed on a dyad and remain stable throughout repeated interactions. In contrast, our theory assumes that the pecuniary utilities associated with structural power conditions are exogenously imposed, while nonpecuniary utilities, such as relational cohesion, develop through endogenous processes involving repeated social interaction and emotions. Applied to stay behavior, for example, rational-choice theory would predict staying whenever the sum of nonpecuniary payoffs (i.e., value of the relation) and pecuniary payoffs (i.e., agreement payoffs) in the focal relation exceeds the payoffs from the alternative. Our theory and our evidence indicate that stay behavior is endogenously produced via relational cohesion; this is contrary to the prediction of rational-choice theory. Relational cohesion reflects the fact that the exchange relation has become an object of value.

Broadly, the theory of relational cohesion suggests an avenue by which interpersonal relations become a source of "social embeddedness" (Granovetter 1985), shaping exchanges, generating informal constraints on malfeasance or opportunism, and reducing "transaction costs" (Williamson 1981). In transaction-cost terms (Williamson 1981),



relational cohesion can be construed as a "relation specific asset" that cannot be transferred from one exchange partner to another, and therefore, it increases the opportunity costs of switching to exchange with alternatives. Williamson (1981) argues that transaction costs—the costs of forming and maintaining contractual relations—can be minimized by constructing hierarchies of control. However, because relational cohesion has an emotional/affective component, long-term horizontal contracting in such relations becomes a more viable alternative to hierarchies of control than is implied by transaction-cost theory. Our research demonstrates that, in the context of emotionally based perceptions of the relation as a unit, people are more likely to stay in their exchange relation, give each other token gifts, and contribute to a new joint venture subject to malfeasance. We argue that these behavioral consequences of relational cohesion reflect a dampening of the original instrumental basis of the relation, the superimposition of an expressive component, and an incipient normative order.

**Edward J. Lawler** is Professor in the Department of Organizational Behavior of the School of Industrial and Labor Relations at Cornell University. With Jeongkoo Yoon, he is expanding the theory of relational cohesion to deal with group formation in multi-actor (N-person) exchange relations and is extending the theory to commitment formation in various network configurations (e.g., stem and branch). He is also (with Charles W. Mueller) testing his theory of affective attachments (*American Sociological Review*, vol. 57, 1992, pp. 327–39) in an application to organizational contexts. He is currently Editor of *Social Psychology Quarterly*.

**Jeongkoo Yoon** is a Post-Doctoral Research Associate in the Department of Organizational Behavior of the School of Industry and Labor Relations at Cornell University. His research interests are power, networks, and social exchange. With Edward J. Lawler he has completed several projects on power and commitment in exchange relations (*American Sociological Review*, vol. 58, 1993, pp. 465–81; *Advances in Group Processes*, vol. 12, 1995, pp. 271–98); they are now collaborating on its extensions. Yoon is also investigating social relations, networks, and emotions in the work organization (*Human Relations*, vol. 47, 1994, pp. 329–51; *Journal of Applied Social Psychology*, vol. 26, 1996, forthcoming).

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