
A Phasic Analysis of Strategy Sequences and Their Mediating Effects on Interaction Goals and Negotiation Outcomes

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Abstract

This study provides a sequential analysis of the bargaining interaction to shed light on how negotiators' interaction goals influence their and their counterparts' behavioral responses and outcomes. Sixty-seven negotiation dyads simulated an employment negotiation. Results showed that integrative reciprocal sequences mediated the influence of competitive goals on joint profit, whereas both distributive and integrative transformational sequences mediated the influence of negotiators' goals on their counterparts' individual gains. Such mediating effects, however, vary by phase, with reciprocal sequences in the second half of negotiation more predictive of joint profit but transformational sequences in the first half more predictive of individual gains. In addition, employers' interaction goals and transformational sequences had a greater influence on employees' individual gains than vice versa.

Keywords

negotiation, interaction goals, behavioral sequences, phases

Although definitions of negotiation vary, most scholars consider negotiation as a communication *process* through which two or more parties, with some apparently conflicting goals, seek to find a better solution than they could otherwise (Putnam & Roloff, 1992). Negotiation theory and research have proliferated over the past few decades. However, the

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process of negotiation has received far less attention than have outcomes (distribution of resources, creation of joint value, and agreements vs. impasse) and input variables (e.g., negotiator characteristics, styles, cognitions, emotions, motives, contextual features, culture; Weingart & Olekalns, 2004). Negotiation scholars have noted that bracketing out the communication processes may lead to inconsistent findings between input and output variables (e.g., Thompson, Medvec, Seiden, & Kopelman, 2001).

This article focuses on the behavioral sequences between negotiating parties within and across two phases of negotiation as a viable mechanism to explain how the competitive and cooperative interaction goals negotiators formed prior to negotiating (the input variable) influence their negotiation outcomes (joint profit and individual gains). The following sections review theory and research that inform the key hypotheses of the study, describe the methods and results, and discuss its theoretical and practical implications.

Interaction Goals

Since the beginning of negotiation research, scholars have considered goals and motives as central elements of negotiation (Carnevale & De Dreu, 2006). Research has consistently shown that the goals (or aspirations) negotiators set prior to their negotiation, as well as their social motives (i.e., the desire to attain certain distribution of outcomes between oneself and the other party), have a tremendous influence on negotiation outcomes (for reviews, see De Dreu, Weingart, & Kwon, 2000; Zetik & Stuhlmacher, 2002). Goals and motives are treated as outcome-driven incentives that are instrumental, are predetermined (either set by self or others, or as dispositional traits), and have enduring effects throughout the negotiation process.

In the communication discipline, researchers have examined *interaction goals* in negotiation as a viable mechanism for explaining why negotiators produce messages the way they do to influence the attitudes or behaviors of others (Keck & Samp, 2007; Liu & Wilson, in press; Wilson & Putnam, 1990). As negotiators need to both compete and cooperate with each other to maximize their individual and joint profits, they tend to pursue multiple, sometimes conflicting goals that not only are oriented toward tangible benefits (instrumental goals) but also serve to attain or maintain favorable identity and relationship with their counterpart (identity and relational goals). As the contextual features of the bargaining interaction change, negotiators may reprioritize their goals accordingly (Liu & Wang, 2010); the influence of interaction goals, therefore, is subject to change. This line of research, although still in its infancy, seeks to uncover the intricate relationships between goals and behaviors at both intrapersonal and interpersonal levels to understand the complicated process of communicating in conflict and negotiation situations (e.g., Keck & Samp, 2007; Liu & Wilson, in press).

For example, Liu and Wilson (in press) assessed eight interaction goals in negotiation that varied in both type (instrumental, identity, and relational) and social motivation (competitive vs. cooperative) based on a theoretical framework developed by Wilson and Putnam (1990). Their research showed that these interaction goals, indicated by negotiators prior to negotiating, had a significant influence on both their own, and their counterparts', bargaining tactics,

as well as both parties' individual and joint gains. The current study extends Liu and Wilson's research in two ways: First, it looks beyond the frequency of bargaining tactics used by each negotiator independently; instead it focuses on negotiating parties' *interactive* behavioral sequences (i.e., what negotiators said or did in response to each other's attitudes and behaviors), thus providing a view of how negotiators "dance" with each other sequentially. Second, it examines the influence of goals and behavioral sequences within and across two negotiation phases, thus shedding light on how the influence of interaction goals may change during a *dynamic* bargaining process.

Strategy Sequences

Research has examined patterns of negotiation behaviors in terms of *tactics* (i.e., specific actions taken to achieve one or more goals), which are classified into different strategy categories depending on their orientation (e.g., distributive vs. integrative, offensive vs. defensive) and function (e.g., information exchange, offers, argumentation; e.g., Pruitt & Lewis, 1975). To date, most analyses focus on how frequencies of various tactics predict outcomes and what contextual variables facilitate or inhibit these processes. Nevertheless, a notable body of research has taken into account the effects of when different bargaining tactics are introduced (timing and phases; e.g., Adair, Weingart, & Brett, 2007; Olekalns, Brett, & Weingart, 2003; Olekalns, Smith, & Walsh, 1996; Putnam, Wilson, & Turner, 1990) and the sequencing of goal-directed communication behaviors over time (e.g., Adair & Brett, 2005; Giebels & Taylor, 2009; Olekalns & Smith, 2000; Olekalns & Weingart, 2008; Putnam & Jones, 1982).

Several lines of research have shed light on sequential analysis of bargaining tactics. Donohue (1981) developed a model of rule use that characterized the negotiation interaction as following three types of communication rules: attacking, defending, and regressing. Putnam and Jones (1982) extended Donohue's work by using a statistical approach, the lag sequential analysis of bargaining tactics, to examine behavioral reciprocity in labor-management negotiations. Based on prior research, Olekalns and Smith (2000) identified three types of strategy sequences: a *reciprocal* sequence in which negotiators match each other's moves exactly (e.g., positional information paired with positional information), a *complementary* sequence in which two functionally congruent (e.g., both competitive or both cooperative) but not identical strategies are paired (e.g., contention followed by positional information), and a *structural* (or *transformational*) sequence in which two functionally incongruent strategies (e.g., one competitive and one cooperative) are paired (e.g., contention followed by priority information). This categorization system has been widely used in recent studies involving sequential analysis of bargaining interaction (e.g., Adair et al., 2007; Olekalns & Smith, 2003).

Reciprocal sequences and joint gains. Although the above studies employed different analytical tools, they all contribute to our understanding of how behavioral reciprocity influences negotiation outcomes. For example, Putnam and Jones (1982) found that negotiators reciprocated both distributive and integrative behaviors when resolving disputes; the likelihood of impasses increased when negotiators reciprocated each other's distributive tactics (e.g.,

attack-attack or defend-defend) rather than balancing their confrontation with an attack-defend pattern. Likewise, Olekalns and Smith (2000) found that in a deal-making situation reciprocation of distributive tactics (e.g., positional information) increased impasses and lowered joint gains, whereas structural sequences involving asymmetric tactics (e.g., conciliation vs. positional information) increased joint gains.

These findings provide evidence that negotiators are not rational decision makers purely oriented toward maximizing their self-interests as traditional economic theories dictate; people reciprocate friendly or hostile actions even if no material gains can be expected (Fehr & Gächter, 2000). The tendency to reciprocate positive behaviors has been documented in many trust and gift exchange games, some of which involve no future interaction (e.g., McCabe, Rassenti, & Smith, 1996). The propensity to retaliate has been considered even more pervasive and stronger than positive reciprocity. Researchers have attributed such reciprocal tendencies to a desire to punish hostile intentions and reward kind intentions to maintain fairness or equity (e.g., Rabin, 1993). Detection of others' goals and intentions, therefore, is a prerequisite for reciprocity.

Considerable scholarship suggests that people infer others' goals throughout conversation, sometimes automatically or implicitly and sometimes consciously (Berger, 2000; Hassin, Aarts, & Ferguson, 2005; Palomares, 2008). Such an inclination may be innate, as infants (Phillips, Baron-Cohen, & Rutter, 1992) and even infant chimpanzees (Uller, 2004) were found to infer others' goals. Research has shown that individuals have the tendency of ascribing their own goals onto others (Kawada, Oettingen, Gollwitzer, & Bargh, 2004). For example, participants who were predisposed to hold the goal to compete perceived others as striving for competitive goals more than control participants. People also detect goals based on the contexts, relational types, behavioral tactics, and other communicative aspects (verbal or nonverbal) of the interaction. Palomares (2008) found that the accuracy and certainty of goal detection is positively associated with the congruence of the interlocutors' goals. In negotiation, unless a noticeable discrepancy is detected between dyad members' goals, which may then activate their conscious (re)assessment of the situation, negotiators who prioritize competitive goals will likely engage in distributive reciprocity, whereas those with cooperative goals, integrative reciprocity.

Reciprocating distributive (value-claiming) tactics, such as making positional statements and contentious arguments, prevents negotiators from discovering integrative potential that is needed for formulating mutually beneficial proposals, and therefore, hurts joint gains. However, when parties reciprocate integrative (value-creating) tactics, such as exchanging priority information and proposing package offers, the likelihood of Pareto optimization is increased. Thus, the study hypothesizes that on the dyad level,

Hypothesis 1 (H1): Reciprocal strategy sequences will mediate the influence of interaction goals on joint profit.

Specifically, increased importance of competitive goals (e.g., "to minimize the other's profit," "to appear assertive and forceful," and "to gain power") will *increase* dyad members' distributive reciprocity (H1a), which will be negatively associated with joint profit (H1b),

whereas it will *decrease* dyad members' integrative reciprocity (H1c), which will be positively associated with joint profit (H1d). Increased importance of cooperative goals (e.g., "to maximize both parties' profit," "to appear polite and considerate," and "to establish a positive relationship") will have the opposite effects on distributive (H1e) and integrative reciprocity (H1f).

Transformational sequences and individual gains. Both complementary and transformational sequences represent efforts to break the norm of reciprocity. A complementary sequence is used when the responder begins to discuss different issue(s) or different aspect(s) of the same issue(s), notwithstanding with the same distributive or integrative orientation; such sequences may reveal a negotiator's unwillingness to reciprocate the counterpart's action, thus attenuating the strength of the strategic orientation of the interaction (e.g., see Table 1).

Specifically, a *distributive complementary* sequence serves to reduce the competitiveness of the bargaining interaction by moving away from a pattern of offers and counteroffers or arguments and counterarguments; however, it does not contribute to value creation because shifting to a new issue without linking it to the old one contributes little to the discovery of integrative potential. An *integrative complementary* sequence reveals a negotiator's unwillingness to accept a multi-issue proposal or to continue sharing priority information; although the negotiator remains committed to an integrative approach by moving on to other issues or concerns, this type of sequence does not contribute directly to value creation either. In addition, neither of the sequences allows the negotiator to claim more value for him- or herself.

However, transformational sequences involve a complete shift in the strategic orientation of the interaction. A *distributive transformational* sequence is used when a negotiator responds to the counterpart's integrative behavior with a distributive approach, seeking to claim more value for him- or herself based on the counterpart's integrative efforts. Such a sequence has the potential of turning the negotiation toward a competitive path, especially when it results in distributive reciprocity; however, because it always follows the counterpart's integrative behavior, frequent use of such sequences reveals the negotiator's conscious effort to slice a bigger portion of the expanded pie in the context of the counterpart's integrative tactics.

An *integrative transformational* sequence occurs when a negotiator responds to the counterpart's distributive behavior with an integrative approach, such as sharing information about interests, preferences, or priorities, or proposing mutually beneficial solutions to expand the pie. If used frequently, such sequences may allow the counterpart to obtain beneficial information and discover integrative potential; however, the frequency also reveals the counterpart's persistent use of distributive (value-claiming) tactics that precede integrative transformation. As such, they may benefit the counterpart more than self in outcome distribution.

An analysis of transformational sequences, therefore, may provide important insights about negotiation processes directed at maximizing individual gains. To date, research has examined how strategy sequences influence joint profit at the dyad level but not how they may influence both negotiators' own and their counterparts' individual gains at the individual level. In the current study, structural equation modeling procedures are used to examine the

Table 1. Definitions and Examples of Strategy Sequence Categories

Sequence categories	Definitions and examples
Distributive reciprocal (DR)	Matching a distributive strategy with a distributive strategy Employer: . . . so a week and a half [vacation], I think will be good. Employee: I still would like to go with 2 weeks. [DR]
Integrative reciprocal (IR)	Matching an integrative strategy with an integrative strategy Employee: I can be flexible with the medical coverage because again this is not as big of a concern to me as the salary. Employer: Well if you want to go with US\$58,000 we are going to have to give you the minimum medical coverage. So the minimum is 60%. [IR]
Distributive complementary (DC)	Responding to a distributive strategy by shifting to a different issue or aspect, still using a distributive approach Employee: I won't be able to start at US\$50,000. That's just not something I'll be able to do, so I'd like to negotiate that. Employer: Um, let's see here. In terms of the salary, what are your main concerns? [DC]
Integrative complementary (IC)	Responding to an integrative strategy by shifting to a new set of issue or aspects, still using an integrative approach Employee: I'm hoping to start at the higher end of the salary, US\$56,000 or US\$58,000, and I would like to start in March. Employer: Umm . . . what are your preferences in terms of medical or vacation? [IC]
Distributive transformational (DT)	Responding to an integrative strategy with a distributive approach Employee: Yes, I'm willing to go with US\$54,000 if you can guarantee the 100% medical benefits. Employer: Absolutely not. . . there is no way, honestly, that the company can survive putting all our starters in the 100% medical. [DT]
Integrative transformational (IT)	Responding to a distributive strategy with an integrative approach Employer: We can go up to like US\$54,000. Yes, this is half way to what you are looking at, as a compromise. Employee: What if we kept the 60% and did US\$56,000, and the US\$2,000 could probably compensate the 40% that comes out of my own pocket. [IT]

Note: Strategy sequence codes in the examples are within square brackets.

links between interaction goals, strategy sequences, and individual gains at both intrapersonal and interpersonal levels. Such procedures, known as the actor-partner mediator models (see Bodenmann, Ledermann, & Bradbury, 2007) allow researchers to estimate the impact of a person's independent variables (IV) not only on his or her own mediating (M) and dependent variables (DV; *actor* effects) but also on his or her partner's M and DV (*partner* effects).

According to Olekalns and Weingart (2008), negotiators use transformational, or process-shifting, behavior either as a deliberate attempt to change the negotiation dynamic or as a defense mechanism to prevent a strategic redirection by the counterpart. Weingart and colleagues (2007) found that in multiparty negotiations, individualistic negotiators did not adjust their predetermined, egocentric approach in response to other negotiation parties' social motives. This is consistent with many experimental games that found competitive players to be unlikely to shift to cooperation (e.g., Kelley & Stahelski, 1970). It is thus reasonable to believe that negotiators who emphasize competitive goals will use fewer integrative transformational sequences that can potentially benefit their counterparts.

Negotiators' decision to change the negotiation dynamic is likely influenced by detection of their counterparts' goals. Weingart et al. (2007) found that when single cooperators found themselves surrounded by individualists in a multiparty negotiation they attempted to turn the negotiation into a more integrative one, whereas they increased value-claiming tactics when they were all cooperators. Such tendencies among cooperators to strategically adjust their distributive and integrative behaviors in response to their counterparts' social motives are consistent with prior research. Tiedens and Fragale (2003) found that participants exposed to a dominant confederate decreased their postural stance, whereas those exposed to a submissive confederate increased their postural stance. Negotiation research also found that when counterparts exhibited competitiveness (e.g., via expressed anger), negotiators responded by making more concessions (Van Kleef, De Dreu, & Manstead, 2004) or using fewer positional statements (Liu, 2009). Therefore, when the counterparts emphasize competitive goals, negotiators will be less likely to use distributive transformational sequences directed at value-claiming, whereas when the counterparts emphasize cooperative goals, they are more likely to capitalize on such cooperativeness to get a bigger slice of the pie via distributive transformation. The study hypothesizes as follows:

Hypothesis 2 (H2): Transformational sequences will mediate the influence of negotiators' interaction goals on their counterparts' individual gains, or vice versa.

Specifically, as negotiators emphasize competitive goals, they will use less integrative transformation (H2a), which will hurt their counterpart's individual gains (H2b). In addition, as the counterparts emphasize competitive goals, negotiators will *decrease* distributive transformation (H2c), which will hurt their own individual gains (H2d), whereas as the counterpart emphasize cooperative goals, negotiators will *increase* distributive transformation (H2e), which will increase their individual gains (H2f).

Negotiation Phases

A phasic approach is compatible with the assumption that negotiators' interaction goals are contextually determined and subject to change, and that change in negotiators' strategic orientation over time is critical to understanding whether and how negotiations will be resolved (Holmes, 1992; Olekalns et al., 1996; Putnam & Jones, 1982). Research on negotiation phases has been mostly independent of negotiation outcomes (Weingart & Olekalns, 2004). The current study seeks to assess whether the influence of interaction goals on negotiators'

and their counterparts' strategy sequences changes over time and whether dyad members' strategic moves and turns in different phases have different effects on their joint and individual outcomes.

Studies of negotiation phases provide evidence that most negotiations begin with a competitive focus but gradually move toward coordination and cooperation (e.g., Adair & Brett, 2005; Putnam & Jones, 1982). This is because negotiation is a mixed-motive activity: Parties represent distinct entities with opposing interests; without cooperation, however, they will not be able to reach a mutually acceptable agreement. At the outset, neither do negotiators have more information about the other party's interests and preferences nor are they certain about the other's motives; thus, they have less trust. Virtually all existing phase models concur that the beginning of negotiation is characterized more by influence than by information exchange, with parties seeking to establish a powerful position through persuasion (Adair & Brett, 2005).

Olekalns and Weingart (2008) argued that negotiators' goals determine the length and stability of a dominant strategic orientation. At the dyad level, when negotiating parties have congruent goals (both are competitive or both are cooperative), they are likely to reciprocate. Congruent competitive goals, therefore, will increase the duration of distributive reciprocity and reduce the likelihood of integrative reciprocity. In the first half of negotiation, this means reciprocating demands, arguments, counteroffers, and counterarguments, with little effort to exchange integrative information. This influence, however, may weaken over time; as negotiation unfolds, parties may discover integrative potential through each other's offer patterns or arguments (Adair et al., 2007; Liu & Wilson, in press) and may begin to incorporate integrative tactics toward the end. Congruent cooperative goals entail greater willingness to break away from a distributive orientation and therefore increase the likelihood of integrative reciprocity in the first half of negotiation. Such influence, however, may also weaken over time because as negotiators generate solutions toward a final agreement, they naturally incorporate both value-creation and value-claiming tactics (Olekalns et al., 1996).

According to Adair and Brett (2005), once negotiators move away from a competitive focus, they tend to have a detailed discussion of the issues and reciprocate priority information before starting to generate solutions. The integrative tactics used in the first half of negotiation, therefore, are largely preparatory. It is after sufficient information is garnered that negotiators can generate high-quality, integrative solutions in the second half of negotiation. Negotiators who continue to reciprocate distributive tactics in the second half will most likely end up with smaller joint gains. Thus, the study hypothesizes as follows:

Hypothesis 3 (H3): The mediating effects of behavioral reciprocity on the influence of interaction goals on joint profit will differ by phase.

Specifically, the influence of competitive goals on distributive and integrative reciprocity will be stronger in the *first* half than in the second half of negotiation (H3a, H3b), whereas the influence of distributive and integrative reciprocity on joint profit will be stronger in the *second* half than in the first half of negotiation (H3c, H3d).

At an individual level, because individual gains in mixed-motive negotiations are determined by both value-creation and value-claiming strategies, negotiators must balance the interplay between distributive and integrative tactics. Although negotiators who prioritize competitive goals are less likely to use integrative transformation, such an *intrapersonal* influence may be stronger in the *first* half of negotiation, when negotiations begin with a stronger competitive focus and negotiators are less influenced by their counterpart's goals; over time, however, it is likely to decrease because negotiators must somehow cooperate to avoid an impasse. As transformational sequences entail conscious efforts to turn the negotiation toward a different direction, greater use of transformational sequences signals greater strategic flexibility of the negotiator (i.e., to either claim value for oneself based on the counterpart's integrative efforts or to emphasize value-creation in response to the counterpart's distributive approach). The earlier negotiators demonstrate such strategic flexibility, the more likely they or their counterparts may benefit from it. For example, the more frequently negotiators use integrative transformation in the first half of the negotiation, the more integrative information their counterparts may accrue to propose solutions more favorable to the counterparts themselves.

However, it takes time for counterparts' goals (especially if different from one's own) to have an effect on negotiators' use of transformational sequences because such influence requires negotiators to recognize goal incongruence, detect the counterpart's goals, and then formulate a strategic response. For example, although detection of counterparts' cooperative goals may increase negotiators' likelihood of using distributive transformation, the effect may be stronger in the *second* half of negotiation, where the counterparts have exhibited sufficient cooperative behavior for negotiators to detect and respond to. However, such a belated effect may be less predictive of negotiators' individual gains. According to Olekalns et al. (1996), negotiators become progressively less willing to accept opponent's arguments as the negotiation proceeds, especially when it comes to resource distribution. Thus, the study predicts the following:

Hypothesis 4 (H4): Transformational sequences used in the *first* half of negotiation will play a stronger role in mediating the influence of negotiators' interaction goals on their counterparts' individual gains than those used in the second half of negotiation.

Method

Participants

One hundred thirty-four students (66 men and 68 women) in a Midwestern university participated in this study in an interaction laboratory over a period of 3 months; each received a US\$7 compensation. The majority of them were graduate students ($N = 90$, 67.2%) above 25 years of age ($N = 84$, 62.7%). On arrival at the research laboratory, students were instructed to read and sign a consent form before they completed a series of tasks. Participants were recruited from two nationalities (70 Chinese, 64 Americans); however, due to the complexity of this study, cultural variations in this process are addressed in a separate article (see Liu, in press).¹

Experimental Design and Hypothetical Scenarios

Participants were randomly paired to form same-sex, same-culture negotiation dyads. Dyad members were randomly assigned to one of two bargaining roles (employer vs. employee) to perform a job contract negotiation. The majority of participants ($N = 112$, 83.6%) reported that they did not know the other person prior to the study. Those who reported knowing each other ($N = 22$, 16.4%) reported a low level of knowledge ($M = 1.83$, $SD = .99$) on a 7-point bipolar scale. Before the core negotiation began, participants were asked to complete a single-issue task concerning the kind of laptop computer the employee would receive from the company. This prenegotiation task functioned simply as a “warm up” task (a) to allow participants to interact with their partner before they formed interaction goals for the main task with the same partner and (b) to highlight the competitive elements of negotiation to discourage participants from reporting only presumably socially appropriate (cooperative) goals.

Participants were then given a scenario of the main task, which involved core terms of employment, including multiple issues (salary, medical coverage, vacation, and start date) that contained integrative potential (i.e., both parties could “win” by trading off issues of differential importance). Before beginning the second task, participants read a description of the issues to be negotiated and responded to a 37-item questionnaire regarding the perceived importance of various goals they might pursue in the main negotiation. Participants were separated into different rooms when reading the scenarios and responding to the questionnaires so that they could ask questions without the presence of the other party. After responding to the goals questionnaire, participants met again to complete the main negotiation and then were debriefed.

The negotiation scenario has been used in previous studies (e.g., Liu, 2009). The payoff schedule for the four issues discussed was designed in ways that reflected three types of negotiation: integrative, distributive, and compatible. Salary and medical coverage were integrative issues (i.e., salary was worth more points for employees whereas medical coverage was worth more points for managers, creating the potential for formulating a mutually beneficial agreement); vacation was a zero-sum distributive issue; start date was a common-value compatible issue (i.e., both parties had the same preference for this issue, though participants, blind to each other’s payoff schedule, had to figure it out for themselves). To ensure that Chinese participants would fully understand the simulation material, all the scenarios and questionnaires were translated into Chinese and then back-translated into English by Chinese graduate students who were experienced in bilingual translation. Chinese participants were encouraged to speak Chinese for optimal communication effectiveness.

Instrumentation

Interaction goals. The study used the same measures of interaction goals as those used by Liu and Wilson (in press). Thirty-seven items measured eight goals that vary in motivational orientation (competitive vs. cooperative) on a Likert-type scale (1 = *strongly disagree*, 7 = *strongly agree*). Four of them are instrumental goals, such as maximizing one’s own

profit (e.g., “I want to maximize the total number of points I can earn in the negotiation”), minimizing the other party’s profit (e.g., “I want to make sure that Mr. Hale will not achieve his goals by the end of the negotiation”), maximizing both parties’ profit (e.g., “I want to find a solution that meets both parties’ needs and concerns”), and understanding the other’s concerns (e.g., “I want to understand what Mr. Hale’s concerns are in the negotiation”); two are identity goals, such as appearing forceful and assertive (e.g., “I want to appear forceful so that Mr. Hale knows I can’t be easily taken advantage of”) and appearing considerate and cooperative (e.g., “I want to appear polite and respectful during the negotiation”); and two are relational goals, such as gaining power over the other party (e.g., “I want to convince Mr. Hale that I have opportunities with other companies”) and promoting a positive relationship (e.g., “I want Mr. Hale to know that I care about our relationship”). Confirmatory factor analyses (CFA) were performed to assess the factor structure of the eight goals, which confirmed a good fit of the measurement models with the data; 30 out of the 37 items loaded significantly on their respective factors and were retained (factor loadings ranging from .45 to .97). Cronbach’s alpha ranged between .69 and .86.

A second-order CFA was then performed on the eight goals to confirm a two-factor structure: cooperative versus competitive goals. The goal of “maximizing one’s own profit” was found to correlate positively with goals of both motivational orientations. As theoretically it captures an individualistic rather than competitive orientation, it was dropped from subsequent analysis. The CFA then produced a good model fit, $\chi^2(11) = 16.67, p = .12$. Factor loadings ranged from .53 to .85 for the competitive scale and from .40 to .89 for the cooperative scale. The two second-order factors were used for subsequent statistical analyses.² Cronbach’s alpha was .73 for both goals.

Negotiation outcomes. *Joint gain* was the total number of points that each pair of participants jointly earned. *Individual gain* was the number of points each individual earned. Three out of the 67 negotiation dyads chose to reach an impasse, even though they were told doing so would result in zero points and were given sufficient time to negotiate. Because such a decision is likely to reflect the influence of interaction goals, data from the three dyads were retained in the analysis. The total number of points that participants could earn by reaching a straight compromise for each issue was assigned to each individual in the three dyads, as has been the practice in many previous studies (e.g., Pruitt & Lewis, 1975). Preliminary analyses indicated that inclusion (or exclusion) of the three dyads did not produce different results.

Coding strategy sequences. Based on transcriptions of 67 videotaped negotiations, two coders proficient in both English and Chinese were trained to code all the speaking turns as one of six codes. Each code represents a strategic response to a prior speaking turn stated by the counterpart. Coders unitized the data by identifying every complete speaking turn in a transcript (i.e., an action and/or statement made by an individual while holding the floor; Weingart, Olekalns, & Smith, 2004). When a negotiator uses vocal fillers, repeats, or paraphrases the counterpart’s message to confirm understanding, it is not considered a complete speaking turn and therefore not coded. The unitizing reliability based on a subset of transcripts was satisfactory (Guetzkow’s *U* was .04). Disagreements were resolved through discussion.

Coders then placed each speaking turn in one of the six coding (strategy sequence) categories (for definitions and examples, see Table 1). Based on the definitions, each code

involves determining (a) the dominant strategic approach of the prior speaking turn stated by the counterpart, (b) the dominant strategic approach of the current speaking turn, and (c) whether the current speaking turn involves a discussion of new issues or different aspects of the same issue. The strategic approach is considered distributive when the speaking turn involves single-issue offers, demands, refusals, positional statements, persuasive (counter) arguments, and threats, whereas the strategic approach is considered integrative when the speaking turn involves asking or sharing priority information, proposing package offers, or making connections between multiple issues. When a speaking turn consists of multiple bargaining strategies and it is difficult to determine the dominant strategic approach, the last part of the speaking turn is used because it is nearest to what the next person responds to. Cohen's kappa was .88. Disagreements were resolved through further discussion. One of the coders coded the rest of the transcripts.

To examine behavioral sequences in different negotiation phases, we used an interval-driven approach and divided each negotiation into two equal phases based on the number of speaking turns. The breaking point using an interval-driven approach is random as compared with an event-driven approach (i.e., mark a transition in phase when negotiators exhibit a cluster of behaviors that is different from the previous one); however, this interval approach facilitates development of general models by controlling for variation in the length of negotiations and allowing for comparisons within and across comparable stages (Adair & Brett, 2005).

There was substantial variation in the amount of time it took participants to finish this negotiation, ranging from 3.5 to 29.5 minutes. As a result, there was substantial variation in the total number of strategy sequences. The raw number of sequences in each category, therefore, is no longer meaningful unless the total number of sequences is taken into account. In addition, all strategy sequences were positively skewed (skewness values ranged between 1.04 and 3.28). Due to these two issues, data-transformation procedures were performed for each type of strategy sequence by log transforming a proportion score between the number of sequences of each type and the total number of sequences used by each participant. After transformation, the normality of the distributions was much improved (skewness values ranged between $-.57$ and $.16$).

Results

Goals, Strategy Sequences, and Joint Profit: A Phasic Analysis

Hypotheses 1 assessed whether reciprocal strategy sequences would mediate the influence of interaction goals on joint profit. Dyadic scores for independent (competitive and cooperative interaction goals) and mediating (the six types of strategy sequences) variables were computed for each negotiation dyad by adding up dyad members' scores on these variables. In recent years, bootstrapping procedures developed by Preacher and Hayes (2004, 2008) have been advocated to be a well-suited method to assess indirect (mediating) effects, especially when the sample size is small. Results of the bootstrapping tests (5,000 resamples, $N = 67$) are summarized in Table 2. β represents the standardized regression coefficients; a path refers to the effect of IV on M, and b path refers to the effect of M on DV after

Table 2. A Contrast of the Mediating Effects of Strategy Sequences in Two Phases on the Influence of Interaction Goals on Joint Profit

	Joint profit (DV; N = 67)						
	Direct effects		Indirect effects		Indirect effects via bootstrap		
	IV → M (a path)	M → DV (IV controlled, b path)	IV → M → DV (ab or c-c' path)	Estimate	BC 90% CI	BC 95% CI	
	$\beta(Z)$	$\beta(Z)$	Estimate	Lower	Upper	Lower	Upper
Competitive goals (IV)							
Distributive reciprocal total (M)	0.11	-0.52 ^{*****}	-0.06	-0.18	.02	-0.20	.03
Distributive reciprocal 1st half (M ₁)	0.17*	-0.14	-0.02	-0.08	.00	-0.10	.01
Distributive reciprocal 2nd half (M ₂)	0.03	-0.51 ^{*****}	-0.02	-0.11	.06	-0.13	.07
Contrast between M ₁ vs. M ₂	(1.35)	(1.91 ^{**})	-0.01	-0.08	.09	-0.09	.11
Integrative reciprocal total (M)	-0.18**	0.45 ^{*****}	-0.08*	-0.20	-0.01	-0.22	.00
Integrative reciprocal 1st half (M ₁)	-0.17**	-0.22	.04	-0.00	.11	-0.00	.14
Integrative reciprocal 2nd half (M ₂)	-0.15*	0.60 ^{*****}	-0.09	-0.22	.00	-0.26	.02
Contrast between M ₁ vs. M ₂	(-0.31)	(-2.88 ^{*****})	.12*	.01	.30	-0.01	.38
Cooperative goals (IV)							
Distributive reciprocal total (M)	-0.09	-0.53 ^{*****}	.05	-0.04	.14	-0.05	.16
Distributive reciprocal 1st half (M ₁)	-0.10	-0.16	.02	-0.01	.08	-0.08	.12
Distributive reciprocal 2nd half (M ₂)	-0.03	-0.51 ^{*****}	.02	-0.08	.12	-0.10	.09
Contrast between M ₁ vs. M ₂	(-0.59)	(1.91 ^{**})	-0.03	-0.10	.09	-0.24	.13
Integrative reciprocal total (M)	-0.07	0.45 ^{*****}	.03	-0.03	.12	-0.05	.15
Integrative reciprocal 1st half (M ₁)	0.11	-0.22	-0.02	-0.10	.00	-0.12	.02
Integrative reciprocal 2nd half (M ₂)	0.01	0.61 ^{*****}	.00	-0.09	.12	-0.12	.14
Contrast between M ₁ vs. M ₂	(1.14)	(-2.88 ^{*****})	-0.03	-0.19	.09	-0.23	.13

Note: BC = bias corrected; CI = confidence interval. 5,000 bootstrap samples. Z is a test statistic for comparing correlated correlation coefficients based on procedures proposed by Meng, Rosenthal, and Rubin (1992). **p* < .10. ***p* < .05. ****p* < .01. *****p* < .001. ******p* < .001.

controlling for IV. Both are named *direct effects* in this article. The *indirect effect* of IV on DV is defined as the product of the $X \rightarrow M$ path (a) and the $M \rightarrow Y$ path (b), or ab . In most situations, $ab = c - c'$, where c is the coefficient for the simple (total) effect of IV on DV *not* controlling for M; and c' is the coefficient for the effect of IV on DV after controlling for M. Table 2 presents indirect effects in the forms of both estimates obtained using a normal theory approach and 90% and 95% confidence intervals (CIs) obtained using a bootstrap approach (see Preacher & Hayes, 2004). An indirect effect is significantly different from zero when zero is not in the 95% CIs.

As Table 2 shows, integrative reciprocal sequences had a marginally significant mediating effect on the influence of competitive goals on joint profit, $\beta = -.08, p = .06$; the bootstrap estimate of the indirect effect lies in the 90% confidence level between $-.20$ and $-.01$ (zero not included). Specifically, dyad members' competitive goals significantly reduced their integrative reciprocal sequences, $\beta = -.18, p < .05$ (H1c was supported), which were positively associated with joint profit, $\beta = .45, p < .001$ (H1d was supported). However, distributive reciprocal sequences did not have a significant mediating effect because their association with competitive goals was nonsignificant, $\beta = .11, p = .22$ (H1a was not supported), even though they had a significant influence on joint profit, $\beta = -.52, p < .001$ (H1b was supported). Finally, neither distributive nor integrative reciprocity was influenced by cooperative goals (H1e and H1f were not supported). H1 was partially supported.

Hypothesis 3 assessed whether the strength of associations between goals, reciprocal sequences and joint profit varies in separate phases of negotiation. The bootstrapping procedures that Preacher and Hayes (2008) proposed for assessing and comparing the mediating effects of multiple mediators were used to assess this hypothesis. As Table 2 shows, the mediating effects of integrative reciprocal sequences in the two phases of negotiation are marginally different from each other, $\beta = .12, p = .10$; the bootstrap estimate of the contrast of the two indirect effects lies in the 90% CI between $.01$ and $.30$ (zero not included). Integrative reciprocal sequences in the second half of negotiation had a significant, positive effect on joint gain, $\beta = .60, p < .001$, whereas those in the first half had a nonsignificant, negative effect, $\beta = -.22, p = .14$.

In addition, the procedures proposed by Meng, Rosenthal, and Rubin (1992) for comparing correlated correlation coefficients (i.e., correlation coefficients between the same dependent variable and a set of independent variables or vice versa) were used to assess H3a through H3d. z scores from these correlation-based tests are reported in Table 2 in parentheses. Specifically, neither did the influence of competitive goals on distributive reciprocity in separate phases, $z = 1.35, p = .18$, nor did their influence on integrative reciprocity in separate phases, $z = -.31, p = .76$, statistically differ from each other; H3a and H3b were not supported. However, the influence of both distributive reciprocity ($z = 1.91, p < .05$) and integrative reciprocity ($z = -2.88, p < .01$) used in the second half of negotiation on joint profit was significantly stronger than those used in the first half; H3c and H3d were supported.

Goals, Strategy Sequences, and Individual Gains: A Phasic Analysis

Hypothesis 2 assessed whether transformational sequences would mediate the influence of negotiators' interaction goals on their counterparts' individual gains. To tackle the issue of

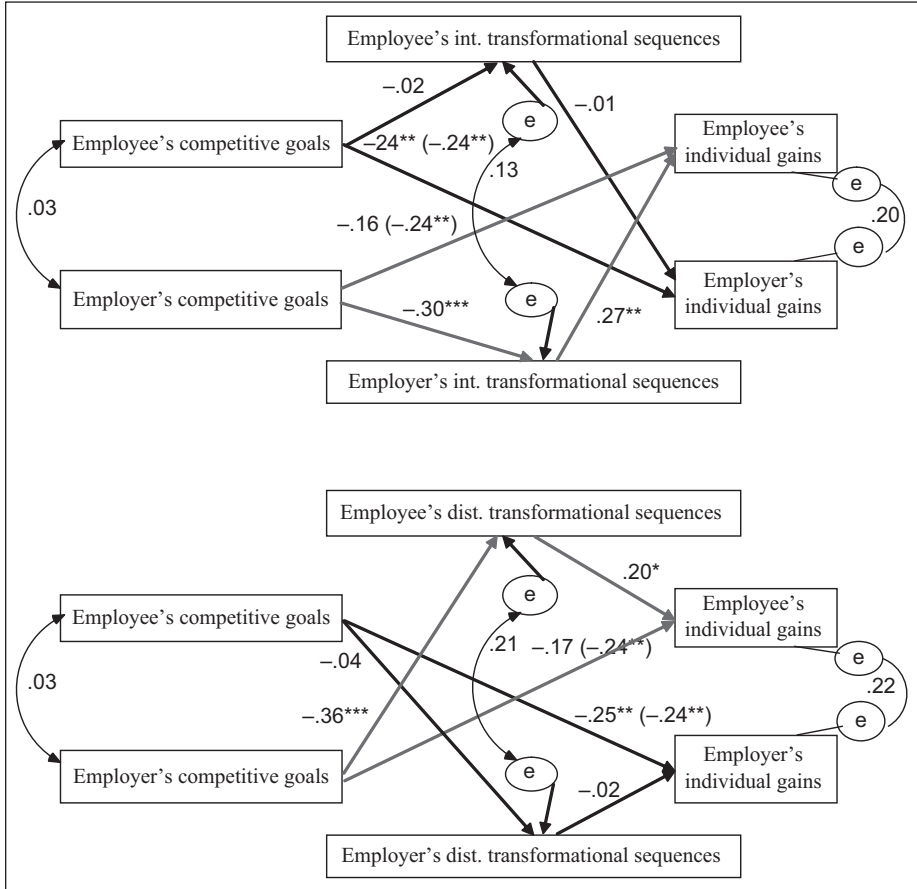


Figure 1. Actor-partner mediator Models 1 and 2

Note: Values are standardized AMOS coefficients. Coefficients in parentheses are the total effect values when the mediators are not controlled. “e” represents the error term for each variable. Test statistics: Model 1: $\chi^2(6) = 4.59, p = .60, CFI = 1.00$; Model 2: $\chi^2(6) = 4.70, p = .58, CFI = 1.00$. * $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

interdependence in interaction research (see Kenny, Kashy, & Cook, 2006), the AMOS Structural Equation Modeling program was used to assess the actor-partner mediator model (APMM), which was specially designed for testing mediations involving distinguishable dyads (i.e., participants in the current study were distinguishable by bargaining role). Three APMMs were assessed. All models fit well (see Figures 1 and 2 for model fit statistics). The significance of the test statistics was based on the number of dyads in the sample ($N = 67$).

According to Model 1, as *employers* placed more importance on competitive goals, they reduced integrative transformational sequences, which hurt *employees'* individual gains; employees' goals and sequences did not have any effect on employers' individual gains. H2a

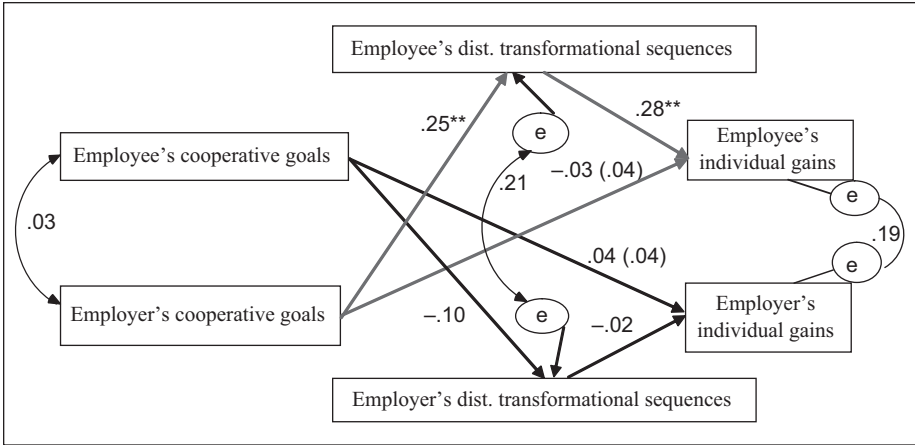


Figure 2. Actor-partner mediator Model 3

Note: Values are standardized AMOS coefficients. Coefficients in parentheses are the total effect values when the mediators are not controlled. "e" represents the error term for each variable. Test statistics: Model 3: $\chi^2(6) = 3.60, p = .73, CFI = 1.00$.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

and H2b were partly supported. As Model 2 shows, as *employers* perceived competitive goals as more important, employees reduced their distributive transformational sequences, which reduced *employees'* own individual gains; employees' competitive goals did not have any effect on employers' sequences and individual gains. H2c and H2d were partly supported. Finally, as Model 3 shows, as *employers* placed more importance on cooperative goals, employees increased distributive transformational sequences to claim value for themselves, which increased *employees'* own individual gains; again, employees' cooperative goals did not have any effect on employers' sequences and individual gains. H2e and H2f were partly supported.

Hypothesis 4 assessed whether the mediating effects of transformational sequences on the influence of interaction goals on counterparts' individual gains would differ by phase. As the above SEM results suggest that such a partner effect was found for employees, but not employers (rendering multilevel analyses as unnecessary), bootstrapping mediation procedures were performed only on the indirect associations between employers' goals and employees' gains. As Table 3 shows, both employers' integrative transformational sequences (bootstrap estimates ranged between $-.23$ and $-.03$ in the 95% CIs) and employees' distributive transformational sequences (bootstrap estimates ranged between $-.26$ and $-.02$ in the 95% CIs) used in the *first* half of negotiation had a significant *mediating* effect on the influence of employers' competitive goals on employee's individual gains, but those used in the second half of negotiation did not have a significant mediating effect. In addition, a contrast of the indirect effects through transformational sequences in separate phases indicates that they were marginally statistically different from each other: Bootstrap estimates for the contrast between employers' integrative transformational sequences in separate phases ranged between $-.28$ and $-.02$ in the 90% CIs, whereas bootstrap estimates for the contrast between

Table 3. A Contrast of the Mediating Effects of Sequences in Two Phases on the Influence of Employer's (ER) Goals on Employee's (EE) Profit

	Joint profit (DV; N = 67)							
	Direct effects		Direct effects		Indirect effects		Indirect effects via bootstrap	
	IV → M (a path)	M → DV (IV controlled, b path)	M → DV (IV controlled, b path)	IV → M → DV (ab or c-c' path)	BC 90% CI		BC 95% CI	
	$\beta(Z)$	$\beta(Z)$	Estimate	Estimate	Lower	Upper	Lower	Upper
ER's competitive goals (IV)								
ER's integrative transformational 1 (M ₁)	-0.36***	-0.27**	-0.10	-0.21	-0.04	-0.23	-0.03	
ER's integrative transformational 2 (M ₁)	-0.26**	-0.04	.01	-0.04	.09	-0.06	.11	
Contrast between M ₁ vs. M ₂	(1.84*)	(1.41)	-0.11	-0.28	-0.02	-0.31	.00	
EE's distributive transformational 1 (M ₁)	-0.44***	-0.26*	-0.12	-0.23	-0.04	-0.26	-0.02	
EE's distributive transformational 2 (M ₁)	-0.27**	-0.07	.02	-0.04	.10	-0.06	.12	
Contrast between M ₁ vs. M ₂	(-0.28)	(1.03)	-0.14	-0.31	-0.02	-0.36	.02	
ER's cooperative goals (IV)								
EE's distributive transformational 1 (M ₁)	0.09	0.32**	.03	-0.02	.13	-0.13	.02	
EE's distributive transformational 2 (M ₁)	0.17	-0.08	-0.01	-0.10	.02	-0.09	.04	
Contrast between M ₁ vs. M ₂	(-0.85)	(1.41)	.04	-0.02	.20	-0.17	.05	

Note: BC = bias corrected; CI = confidence interval. 5,000 bootstrap samples. Z is a test statistic for comparing correlated correlation coefficients based on procedures proposed by Meng, Rosenthal, and Rubin (1992).
 *p < .10. **p < .05. ***p < .01. ****p < .001.

employees' distributive transformational sequences in separate phases ranged between $-.31$ and $-.02$ in the 90% CIs. However, transformational sequences used in neither phase significantly mediated the interpersonal influence of cooperative goals on individual gains. H4 was partially supported.

Discussion

Although ample evidence suggests that goals and motives have an important impact on negotiation outcomes, most research has examined them as either predetermined, externally set aspiration points, or dispositional attributes, or situationally primed incentives oriented toward resource distribution. In any case, the influence of goals or motives has been considered relatively independent of the counterpart's influence and does not change over time. The current study examined not only various types of goals (instrumental, identity, and relational) that arise from negotiators' initial interaction with a counterpart but also how these goals influence both their own and their counterpart's sequential strategic responses to each other's behaviors, how such influences change over time, and finally, what consequences they have on negotiators' individual and joint gains. Below is a review of the findings of this study, followed by a discussion of directions for future research.

Interaction Goals, Behavioral Reciprocity, Phases, and Joint Profit

When examined at the dyad level, the study found that as negotiators placed greater importance on competitively oriented goals, such as minimizing the counterpart's profit, appearing assertive and forceful, and gaining power over the counterpart, they were less likely to introduce and reciprocate integrative tactics; as a result, both parties ended up with a smaller "pie." Most of the phase models in existing negotiation research have shown that negotiations move from a more distributive to a more integrative focus over time (e.g., Adair & Brett, 2005; Putnam & Jones, 1982). Perhaps for this reason, competitive goals only had a marginally significant effect on distributive reciprocity in the first half of negotiation. However, the negative influence of competitive goals on integrative reciprocity, although weakening in strength, is prevalent throughout negotiation.

Consistent with previous studies (e.g., Olekalns & Smith, 2000, 2003), distributive reciprocity reduced joint gains, whereas integrative reciprocity increased joint gains. Based on a phasic analysis, however, only reciprocal behaviors in the second half of negotiation significantly predicted joint profit. Furthermore, integrative reciprocal sequences in the first half of negotiation might even work counterproductively toward joint gains. In other words, negotiators who began negotiations by building relationships or exchanging priority information with each other, yet who were unable to sustain integrative reciprocity and instead moved toward a distributive path in the second half of negotiation, may end up with less joint profit. In addition, cooperative goals, such as maximizing both parties' profit, appearing considerate and polite, and establishing a positive relationship with the other party, apparently had little influence on behavioral reciprocity, and consequently, no effect on joint profit.

Although existing research on negotiation phases is primarily descriptive, the above findings suggest that phase models can be prescriptive as well. Moving from competition to cooperation, as most phase models depicted, is not only natural but also necessary for value creation. As negotiators get together to resolve incompatible interests, distributive reciprocity, which serve to define each other's aspirations along with key arguments, are often expected at the beginning of negotiation. Unless negotiators are psychologically anchored by a set of competitive goals, once they start incorporating integrative tactics while generating solutions, the initial open exchange of positional information helps to ensure they fully exploit the existing resources. However, moving from cooperation to competition is counterproductive. Integrative tactics, when used at the beginning of negotiation, may redefine negotiators' expectations toward each other. According to Palomares (in press), the certainty of goal inferences decreases when detectors are cognitively busy. When negotiators fail to sustain integrative reciprocity and begin to transition to a more distributive focus, their cognitive schema may be further destabilized; their ability to infer integrative potential may also be compromised. Distributive tactics used in the second half of negotiation, therefore, may function to only split an unexpanded pie. Findings from the study also suggest that negotiators should be wary of their competitive goals and how such goals may prevent them from moving toward an integrative direction; as value creation requires sufficient integrative reciprocity, negotiators should develop skills for breaking distributive reciprocity and sustaining integrative reciprocity especially in the second half of negotiation.

Interaction Goals, Transformational Sequences, Phases, and Individual Gains

When examined at the individual level, the study found that negotiators' goals, or detection of their counterparts' goals, was associated with their decision to change the negotiation dynamic toward a different strategic direction, which consequently affected their or their counterparts' individual gains. Specifically, as employers emphasized competitive goals, employees were less likely to claim more value for themselves because (a) these goals reduced employers' likelihood to transform the negotiation toward an integrative direction and (b) when employers did use integrative tactics, their competitiveness prevented employees from redirecting the negotiation toward value-claiming. However, when employers valued cooperative goals, employees were more likely to claim value based on employees' integrative efforts (i.e., use distributive transformation sequences) and consequently gained more value.

A phasic analysis indicated that the decisions to transform negotiation by either party in the *first* half of negotiation had stronger mediating effects on the influence of employers' competitive goals on employees' individual gains (at the 90% CI level). As employers deemphasized competitive goals, they were more likely to transform negotiation toward an integrative direction at an earlier stage; such decisions demonstrated greater strategic flexibility and increased employees' likelihood to benefit from it. However, employees' decisions to transform negotiation were influenced by their detection of employers' goals, which took longer to happen; although the influence of employers' competitive goals (or lack thereof) remained significant throughout negotiation, belated increase of employees' distributive

transformation was no longer predictive of their individual gains. In addition, although employers' cooperative goals increased employees' overall use of distributive transformation, such an influence became nonsignificant in either phase when examined separately.

These findings suggest a few important things. First, although behavioral reciprocity plays a major role in predicting joint outcomes, negotiators' decisions to transform negotiation either to one's own advantage, or to both parties' benefits, have a stronger effect on individual gains; the earlier the transformational sequences are (not) used, the stronger the effect. Second, in employment negotiations, the influence of status and power is pervasive. Not only did employers' strategic responses directly determine the amount of benefits employees can receive instead of vice versa, but (perception of) employers' goals also shaped employees' behavioral responses and consequently their outcomes. These findings suggest that power exerts influence beyond overt and coercive means. Existing research shows that low-power individuals tend to have lower expectancies for their success (Magee & Galinsky, 2008); in this study, this effect was counteracted only when employees perceived their employers to be cooperatively oriented. As interaction goals were formed based on prior interaction, future research should investigate the factors that influence the formation of interaction goals for additional insights.

Limitations and Directions for Future Research

Despite the considerable insights that the study provides to a dynamic, interactive negotiation process, it is not without limitations. As data collection consumes a tremendous amount of time and resources, the study used undergraduate and graduate students as the primary participants. Future research should replicate the study with working professionals with more negotiation experience. Furthermore, in this study, competitive and cooperative goals were examined as independent variables. In a recent study, Liu and Wang (2010) found that negotiators' causal attributions and emotions (e.g., anger and compassion) have a significant influence on the extent to which they pursue competitive and cooperative interaction goals; this is because such emotions trigger different levels of trust and distrust they have toward the counterpart. Future research, therefore, should investigate interaction goals as a mediating mechanism for explaining the influence of various input variables (e.g., attribution, emotion, trust) on outcome variables (e.g., frequencies and sequences of bargaining behaviors, joint profit, individual gains). This type of research will be especially valuable for communication scholars because of the scarcity of attention to the communication processes in negotiation research.

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Notes

1. Although the study consists of culturally heterogeneous samples, the inclusion of culture and the product terms between culture and the IVs (competitive and cooperative goals) did not produce different results concerning the mediating effects hypothesized in this study.
2. Although analyses for hypothesis testing were also performed on each of the eight individual goals, the results did not provide additional insights than those generated using the two superordinate goals (competitive vs. cooperative). In particular, goals that vary in type but share the same motivational orientation exhibit similar patterns in predicting behavioral sequences and outcomes. This suggests that identity and relational goals (which are typically ignored in the negotiation literature) are as important as instrumental goals. To avoid unnecessary repetition, only results generated using the two superordinate goals are reported in this article.

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Bio

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