

## Rapport in Conflict Resolution: Accounting for How Face-to-Face Contact Fosters Mutual Cooperation in Mixed-Motive Conflicts

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We propose that face-to-face contact fosters the development of rapport and thereby helps negotiators coordinate on mutually beneficial settlements in mixed-motive conflicts. Specifically, we investigate whether, in a cooperative climate, negotiators' visual access to each other's nonverbal behavior fosters a dyadic state of rapport that facilitates mutual cooperation. Experiment 1 manipulated whether negotiators stood face-to-face or side-by-side (unable to see each other) in a simulated strike negotiation. Face-to-face dyads were more likely to coordinate on a settlement early in the strike, resulting in higher joint gains. An alternative interpretation in terms of an anticipatory effect of face-to-face contact was not supported. Experiment 2 manipulated whether previously unacquainted negotiators conversed face-to-face or by telephone before separating to play a conflict game with the structure of a Prisoner's Dilemma game. Face-to-face dyads were more likely to coordinate on high joint gain outcomes. The facilitatory effect of face-to-face contact was statistically mediated by a measure of dyadic rapport. Results did not support alternative interpretations based on individual-level positive affect or expectations about opponents. We conclude with a discussion of the role of affective and dyad-level processes in social psychological models of conflict resolution. © 2000 Academic Press

Many interactions in life are mixed-motive conflicts in which the collectively optimal outcome requires mutual cooperation but individual self-interest makes it tempting not to cooperate (Axelrod, 1984; Kelley & Thibaut, 1954; Rubin &

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Brown, 1975). Often each party would prefer to cooperate if the other party cooperates but not otherwise; efficient conflict resolution hinges, then, on whether the two negotiators can coordinate in cooperation (Schelling, 1960). Unfortunately, in practice, negotiators often fail to coordinate, resulting in suboptimal settlements, expensive delays, and escalated antagonism (Mnookin & Ross, 1995; Pruitt & Rubin, 1986). Because of the costs associated with conflict-resolution failures, researchers have tried to identify the social psychological processes that impede or facilitate mutual cooperation in mixed-motive conflicts (for reviews, see Neale & Bazerman, 1991; Pruitt & Carnevale, 1993; Thompson, 1998).

One possible facilitator of mutual cooperation is *face-to-face contact*. When seeking to work cooperatively, diplomats and business negotiators will travel across the world, enduring jet lag and unfamiliar surroundings, to hold a brief conversation in person rather than by telephone. Studies of managers handling everyday conflicts reveal a similar preference for face-to-face communication (Johansen, Vallee, & Vian, 1979; Mintzberg, 1980). One reason for this might be that face-to-face contact facilitates mutual cooperation, and indeed research finds evidence consistent with this possibility. Previous studies with mixed-motive tasks have observed better outcomes when negotiators communicate than when they do not (Dawes, McTavish, & Shaklee, 1977; Loomis, 1959) and when negotiators communicate face-to-face as opposed to in writing (Sheffield, 1989; Valley, Moag, & Bazerman, 1998). However, evidence is unclear as to whether face-to-face communication has advantages over minimally different conditions, such as telephone communication (see Lewis & Fry, 1977; Morley & Stephenson, 1977). Further, there is little understanding of how face-to-face contact helps—that is, little evidence about the social psychological process fostered by face-to-face contact that enables coordination on cooperative outcomes.

In this article, we provide evidence that the social psychological process of *rapport* accounts for facilitatory effects of face-to-face contact on cooperation in conflict resolution. Rapport is conceptualized as a state of mutual positivity and interest that arises through the convergence of nonverbal expressive behavior in an interaction (see Bernieri, 1988, and Tickle-Degnen & Rosenthal, 1990). In view of this conceptualization, we hypothesize that the development of rapport is fostered when negotiators have visual access to each other. Although some aspects of nonverbal emotional expression (e.g., tone of voice) are accessible in a telephone interaction, most channels of nonverbal expression (e.g., facial, postural, and gestural cues) are accessible only visually. We further hypothesize that rapport helps a dyad coordinate to cooperate in mixed-motive conflicts. Theorists have laid groundwork for this hypothesis about consequences of rapport by suggesting that rapport is a social mechanism that serves the function of enabling coordinated action in dyads and groups (Argyle, 1990).

We test these hypotheses in two experiments that manipulate the presence of face-to-face interaction in different ways. In the first experiment, we manipulate whether negotiators in a simulated strike stand face-to-face (and have visual access to each other's nonverbal behavior) or stand side-by-side (and hence lack

visual access). We test the rapport explanation against an alternative account of why face-to-face contact facilitates coordination. In the second experiment, we manipulate whether two previously unacquainted negotiators converse face-to-face versus by telephone before separating to play a conflict game with the structure of the Prisoner's Dilemma. In this experiment, we directly measure the level of dyadic rapport during the interaction, which allows us to test whether rapport mediates the effect of face-to-face contact on conflict resolution decisions. We also test this explanation in terms of dyadic rapport against alternative explanations in terms of individual expectations and in terms of individual-level positive affect.

## RAPPORT

Although it has been a prominent construct in popular literature on negotiation (Brooks, 1991; Ury, 1993), rapport has not played a prominent role in conflict research, perhaps because of a lack of clear conceptualization or operationalization (DePaulo & Bell, 1990). However, considerable progress in refining the rapport construct has come from recent research on rapport in clinical interactions, such as that between physician and patient or therapist and client (see Blanck, Buck, & Rosenthal, 1986; Harrigan & Rosenthal, 1986). For these researchers, rapport is a state of mutual positivity and interest that arises through the entrainment of expressive behavior in an interaction (Tickle-Degnen & Rosenthal, 1990).

Rapport differs from related constructs in several ways. First and most important, rapport is conceptualized as a dyadic or group-level process rather than a process internal to one individual (DePaulo & Bell, 1990). This marks a change from previous uses of the term "rapport" to refer to one individual's perception of another (Freud, 1913/1959), which did not prove to be empirically tractable (Goudy & Potter, 1976).

Second, rapport is seen as arising through the entrainment, convergence, or coordination of expressive behavior (Tickle-Degnen & Rosenthal, 1990). Studies have found that the level of rapport in an interaction can be reliably judged from the convergence or synchrony of nonverbal displays (Bernieri, 1988, 1991; Bernieri et al., 1994). In other words, an onlooker who watches an interaction (without hearing the conversation) makes rapport judgments that correlate with the reports of rapport by the actors in the interaction.

Theorists have suggested that rapport serves the function of enabling social coordination or cooperation (Argyle, 1990). However, the role of rapport in conflict resolution has not yet been empirically investigated.

### *Face-to-Face Contact and Conflict Resolution: Role of Rapport*

A number of studies of mixed-motive conflict have demonstrated that the presence of communication, as opposed to its absence, facilitates mutual cooperation. For example, rates of coordination in social dilemma games are higher when participants communicate with each other (e.g., Dawes et al., 1977; Loomis,

1959). These findings provide reason to reject a strong hypothesis drawn from economic theory that "talk is cheap," that communication has no consequences for decisions. However, these findings do not speak directly to why face-to-face communication has advantages over other forms of communication. Although studies show that conflict resolution is facilitated by communication through face-to-face interaction rather than through an exchange of written texts (Sheffield, 1989; Valley, Moag, & Bazerman, 1998) and thus isolate a facilitatory effect of face-to-face communication (versus text-based communication), they do not provide incisive evidence with regard to the relation between visual access and rapport; face-to-face and text-based communication differ on a number of dimensions besides the dimension of visual access (for an analysis of the many dimensions distinguishing communication media, see Poole, Shannon, & DeSanctis, 1992).

The evidence most relevant to the current hypotheses derives from studies that have compared communication conditions differing solely in the presence versus absence of visual access. Williams (1977) reviewed several comparisons of face-to-face versus telephone interactions that found face-to-face negotiations to be less competitive. In simulations of bargaining in a longstanding union-management relationship, Morley and Stephenson (1977) found that negotiators in a strong position are more generous to their counterparts in face-to-face than telephone negotiations.

As recent review of the literature on communication media and negotiation concludes, most studies have been "outcome oriented" and have not measured interpersonal processes (Poole, Shannon, & DeSanctis, 1992, p. 61). Nevertheless, there is some indirect evidence that face-to-face communication is more likely to foster mutual positivity and interest. Studies of negotiation tasks have found that participants in a face-to-face condition are less likely to contradict their counterpart in a negative manner (Siegal, Dubrovsky, Kiesler, & McGuire, 1986; Turoff & Hiltz, 1982). Experimental studies of performance appraisal meetings have found that, in a face-to-face condition, supervisors are more likely to show interest in subordinates' perspectives (Carroll & Scheier, 1982; Gioia & Sims, 1986).

Given the assumption that rapport arises through an entrainment of positive expression (Tickle-Degnen & Rosenthal, 1990), we should expect that face-to-face interaction leads to high joint gain in contexts like that of a long-term relationship or a cooperatively defined interaction. Face-to-face interaction fosters a resonance and amplification of positive expression and interest, but rapport does not grow where conditions encourage competitiveness. Studies that have oriented participants to define their task competitively have found that negotiators in a face-to-face condition obtain *lower* collective outcomes than negotiators in a condition in which visual access was blocked by a barrier (Carnevale, Pruitt, & Seilheimer, 1981; Lewis & Fry, 1977). Process measures in these studies suggest that negotiators in the barrier condition visually attended to their issue information and this enabled a problem-solving dynamic. By contrast, negotiators in the

face-to-face condition were more likely to engage in nonverbal dominance tactics, such as staring at their opponent, and this accentuated a competitive dynamic.

In sum, the pattern of findings from past studies is consistent with our proposal that the facilitatory effect of face-to-face contact on conflict resolution runs through the mechanism of rapport. However, the past studies were not designed to test this proposal and can be interpreted in other ways as well. Our experiments provide direct tests between the rapport explanation and rival explanations.

## EXPERIMENT 1

Our first experiment tests for a facilitatory effect on conflict resolution of face-to-face contact relative to a minimally different condition. The design holds constant the amount of verbal communication across conditions. The context, a union-management negotiation during a wage strike, exemplifies a mixed-motive game because the possible settlements of a strike are not simply different ways of dividing a “fixed pie” of value; a better metaphor would be a “shrinking pie” in that the accumulating costs of the strike reduce the value of any eventual wage agreement. At the start of a strike, both sides typically hold ambitious aspirations (Pruitt & Rubin, 1986) which they mistakenly perceive to be manifestly fair (Thompson & Loewenstein, 1992). The negotiator’s dilemma is that although the collectively optimal outcome requires cooperation (i.e., quick and large concessions are requisite for a short strike), cooperation puts one at risk for a very low individual outcome (i.e., when it is unreciprocated). Hence, strike negotiations are often characterized by tentative patterns of concession making that result in far worse outcomes for both sides than if the “pie” simply had been divided before it was reduced by the costs of the strike.

Experiment 1 uses the strike context to test our rapport account of the effects of visual access to the counterpart against an alternative interpretation in terms of how the anticipation of face-to-face contact tempers aggressive goals. The anticipatory account of face-to-face facilitation can be illustrated by a case in which negotiators who have been aggressive when making offers from their respective headquarters become more reasonable just before they meet in person. In such cases, the prospect of face-to-face contact may temper unrealistic views of a fair solution by changing the perceived relationship with the counterpart. A management representative who knows he will be shaking hands and sitting at a common table with a union representative might become less likely to view that representative as undeserving and untrustworthy. Just as negotiators shift to more reasonable aspirations and more equality-based standards of fairness when they expect to face a close acquaintance (Halpern, 1992), negotiators may shift when they expect to interact closely with the counterpart. Indeed, there is considerable evidence that norms for close relationships are evoked by immediacy of communication with another person (Mehrabian, 1971; Rubin & Brown, 1975).

In contrast to the anticipatory account, the rapport account predicts that face-to-face contact has its effects *during* rather than *prior to* an interaction. We expect that face-to-face negotiators would begin with aspirations just as ambitious

as non-face-to-face negotiators, yet face-to-face negotiators would move quickly away from those aspirations.

We tested between accounts of face-to-face facilitation in a simulated strike negotiation between union and management parties with a positive working relationship (see Drolet, Larrick, & Morris, 1998; Thompson & Loewenstein, 1992). Outcomes in this simulation depend highly on the number of strike days endured before a settlement; mutually beneficial outcomes occur when the strike settles quickly. In a minimal manipulation, we varied whether negotiators stood *face-to-face* and had access to each others' nonverbal behavior or stood *side-by-side* and had no access. The primary dependent measures were the amount of the wage settlement and the number of strike days before settlement. Other measured variables included prenegotiation judgments of the wage level negotiators set as their aspiration and the wage level negotiators regarded as fair. The anticipatory account of face-to-face facilitation can be assessed by examining the effect of the manipulation on prenegotiation aspirations and fairness judgments. The account in terms of interaction rapport can be assessed by examining the effect of the manipulation on the number of strike days (after any effects of aspirations and fairness judgments have been taken into account).

### *Method*

*Participants.* One hundred thirty-four master of business administration students from Stanford University, enrolled in two sections of a course on negotiation, participated in this study.

*Procedure.* All participants received background case information concerning a wage conflict between the management of a small steel fabrication firm and the union representing its workers. Participants also received information about the history of the working relationship between the two parties. Specifically, participants were told that the level of past cooperation was sufficient that the two parties had "opened their books to each other." The information in these books—information about the economic impact to each party of different levels of wage and different lengths of strike—was provided. The information revealed that high costs to both parties accumulated with each day of strike (for details, see Harvard Business School Case "Leckenby, Inc."). Participants were randomly assigned to either a union or management role and experimental condition. They read the case before class and made final preparation in class by answering several questions about their goals. While preparing, participants knew their condition but not the identity of their counterpart. Participants were instructed that they would negotiate by exchanging wage offers written on slips of paper on each day of 22 simulated days, until offers from the two sides overlapped and the strike settled. On each new day, an offer could remain constant or could change in the direction of increasing value to the opponent; offers were not permitted to change in the direction of decreasing generosity.

*Manipulation.* Several dyads were run during the same session in a large room. Dyads in the side-by-side and face-to-face conditions were not mixed in the same

session. The two conditions differed in the physical arrangement of negotiators relative to their counterpart. As conventional in this paradigm (Thompson & Loewenstein, 1992), participants were not allowed to communicate verbally. On each simulated day of negotiation, numerical wage offers were written on slips of paper and placed on the table in view of both participants. In the side-by-side condition, participants sat next to each other facing the front of the room. Their instructions not to look at each other during the negotiation were explained as necessary to simulate the conditions under which a strike is negotiated. By contrast, in the face-to-face condition, participants sat facing each other. They were instructed that emotional expression, so long as they were silent, was permitted.

*Prenegotiation questions.* Before the start of the first round, participants were asked to write the wage level at which they would be happy to settle (aspiration level wage) and the level that would be considered fair from the vantage of a neutral third party (perceived fair wage).

*Negotiation outcomes.* Daily rounds of negotiation were called out at 1-min intervals by the experimenter. Negotiation dyads exchanged written offers each round until their strike settled. For each day the parties failed to reach agreement, the payoff to both sides was reduced by the strike costs. The opening offers were fixed by the case: the union's offer was \$11 an hour and management's offer was \$10. The sides had 2 days to reach an agreement without suffering losses; after the second day, costs began increasing for both sides with each day of the strike. An agreement was reached when the offers overlapped (i.e., union's offer was less than management's offer) and the wage was set as the midpoint between the two offers.

## Results

*Prenegotiation questions.* Table 1 shows negotiators' judgments of a favorable settlement (aspiration level wage) and a neutral third party's likely settlement

TABLE 1  
Prenegotiation Judgments of Management and Union Representatives as a Function of Condition (Experiment 1)

	Condition	
	Side-by-side	Face-to-face
	Aspiration level wage	
Management	10.27	10.51
Union	10.67	10.68
	Perceived fair wage	
Management	10.40	10.50
Union	10.59	10.62

*Note.* No effects of condition were significant.

TABLE 2  
Outcomes of Simulated Strike Negotiation as a Function of Condition (Experiment 1)

	Condition	
	Side-by-side	Face-to-face
Wage	10.56	10.53
Strike days	12.90	8.21**

Note. Asterisks indicate significant effects of condition.

\*\*  $p < .01$ .

(perceived fair wage). Consistent with previous studies in this paradigm (Drolet et al., 1998; Thompson & Loewenstein, 1992), union aspired to receive a higher wage than management aspired to give [ $F(1, 52) = 7.04, p < .02$ ]. Before discussing tests of hypotheses, it is worth noting that, although union and management aspirations differed, negotiators were generally close enough together in their aspirations that, within the structure of payoffs of the case, the best way to approximate their aspirations would have been to meet halfway on wage before strike costs. In other words, a negotiator had more to lose from strike costs than from concessions needed to meet his or her counterpart halfway. Additionally, as expected, negotiators' aspirations were supported by self-serving fairness perceptions; judgments of a fair wage were higher by union representatives than management representatives [ $F(1, 53) = 11.64, p < .005$ ].

Contrary to the anticipatory account of the facilitatory effect of face-to-face contact, negotiators who knew they would have visual access to their counterpart did not show less ambitious aspirations or less self-serving fairness perceptions. The two experimental conditions did not differ in the spread of negotiator aspirations [ $F(1, 52) = 1.09, p > .10$ ] or fairness perceptions [ $F(1, 53) = .76, p > .10$ ].<sup>1</sup>

*Negotiation outcomes.* As Table 2 shows, the minimal manipulation of face-to-face contact had a substantial impact on conflict-resolution outcomes. Importantly, conditions did not differ in the final wage level on which dyads settled [ $F(1, 62) = .52, p = .47$ ]; face-to-face contact did not, for example, make management more generous toward the union. Rather, face-to-face dyads suffered less costly delay in resolving the strike. Dyads in the side-by-side condition endured significantly longer strikes ( $M = 12.90$  days) than dyads in the face-to-face condition [ $M = 8.21$  days;  $F(1, 62) = 7.17, p < .01$ ].

### Discussion

The results of Experiment 1 suggest that the *experience* of rapport during face-to-face interaction rather than the *anticipation* of face-to-face interaction

<sup>1</sup> The degrees of freedom change because of missing data that entered into the differential aspiration score for 13 dyads, the differential fairness perception score in 12 dyads, and missing outcome measures in 3 dyads.



fosters coordination in mixed-motive conflicts. Although the gap between management and union aspirations was equivalent across conditions, face-to-face negotiators coordinated more efficiently in the negotiation to close this gap. Our interpretation that delays reflect failure to coordinate rather than deliberate strategies of obstinance is based on two considerations. First, the closeness of participants' fairness judgments to their aspirations suggests that they were not deliberately pursuing goals that they believed to be unrealistic. Second, in debriefing sessions, participants were informally asked if they had expected a strike of longer than 5 days, and few answered in the affirmative. The length of strikes in the face-to-face condition corresponded to that observed in a previous face-to-face study with this population (Drolet et al., 1998), which suggests that instructions did not create any special demand effects. In sum, the best interpretation of the results appears to be that the absence of visual access in the side-by-side condition made coordination more difficult.

Because nonverbal access was the only difference between conditions (i.e., the level of anonymity and of physical proximity was constant), Experiment 1 provides evidence that nonverbal exchange causally impacts conflict-resolution outcomes. Admittedly, however, Experiment 1 does not prove that nonverbal exchange has its impact through dyadic rapport. Nonverbal exchange might affect expectations about the counterpart's decision and thereby affect decision making. Or, discomfort with the dearth of nonverbal exchange in the side-by-side condition may have simply lowered individual-level positive affect. Hence, in our second experiment, we attempt to measure dyadic rapport and test that it mediates effects of face-to-face contact on conflict resolution. We also measure expectations and positive affect.

### *Alternative Interpretations*

*Media effects on expectations of the opponent's behavior.* A long tradition of theory and research on mixed-motive conflicts has focused on negotiators' expectations of counterparts (e.g., Kelley & Stahelski, 1970; Schelling, 1960). The facilitatory effect of communication has been explained in terms of how an individual's decision hinges on expectations about the counterpart's strategy. That is, communication allows negotiators to convey a positive impression to each other. Hence, communication leads to increased perceptions of the counterpart's cooperativeness, and, in turn, to increased cooperation (Dawes et al., 1977). It is not clear, however, that a purely expectation-based account can explain a difference between different kinds of communication. For example, participants talking on the telephone are probably just as likely to present a positive impression as those talking face-to-face. Indeed, studies comparing telephone and face-to-face interactions have found no difference in the amount of self-disclosure (Janofsky, 1970) or the accuracy of social perceptions (Williams, 1977). In sum, it is difficult to interpret a facilitatory effect of face-to-face communication over other kinds of communication purely in terms of expectations. A purely expectation-

based account begs the question of *why* expectations would differ as a function of visual access.

Nevertheless, it is also possible that expectations play a role in mediating the impact of rapport on conflict-resolution decisions. One reason that rapport leads to cooperation may be that it dampens tendencies to form negative attributions and expectations. Several researchers have emphasized that negative attributions about a counterpart are more likely when the perceiver is in a negative emotional state, such as anger or anxiety (Keltner, Ellworth, & Edwards, 1993; Pruitt & Rubin, 1986). If rapport alleviates these negative emotional states, then rapport may have its impact on conflict decisions through shifting attributions and expectations.

*Media effects on positive affect.* Another alternative explanation for the results of Experiment 1 turns on how a communication setting impacts an individual's mood. In particular, decisions to cooperate might be explained in terms of how individual-level affective states influence conflict decisions (see Barry & Oliver, 1996, for a review). For example, positive affect arising from negotiators' comfort with face-to-face communication per se versus other forms of communication (e.g., talking without visual access) may be the mechanism for effects of face-to-face contact on cooperative decisions. Face-to-face, obviously, is the most natural medium of communication; artificial media are slower, more taxing, and more likely to cause annoyance (Poole et al., 1992). It may be, then, that individual-level affect deriving directly from the communication medium itself, not from rapport with one's counterpart, is the crucial mechanism for the media effect. An individual's affect or mood has been shown to influence decisions like those made in negotiation. For instance, the link between an individual's positive affect and decisions to help is well established (Forgas, 1992; Isen & Levin, 1972; Schwarz & Clore, 1993). Some researchers have reported that manipulating positive affect leads to coordination in negotiation (Carnevale & Isen, 1988). However, this effect only held in the condition of their experiment where negotiators had visual access to each other, hence it may reflect not simply affect but a more complex mechanism such as rapport. A recent review of research on affect in negotiation concluded that findings do not support a simple relationship; rather, the influence of affect depends on its context (Barry & Oliver, 1996). Although positive affect and rapport are related constructs, we can tease them apart by measuring them through independent procedures and independently testing their relation to negotiation outcomes.

## EXPERIMENT 2

Experiment 2 compared conflict-resolution decisions that followed initial conversations that varied in communication media. We compared dyads that interacted by *telephone* with dyads that interacted in a *face-to-face* meeting. Whereas both communication media allow for free-flowing communication of verbal information, they clearly differ in their capacity to transmit and facilitate feedback of nonverbal signals, such as facial, postural, and gestural cues. Our

session captured a sequence in which negotiators meet, hold a conversation, and then separate before making their decisions. We measured a dyad's level of rapport during the conversation by combining two kinds of measures, each with its own limitations. One measure of dyadic rapport is the self-report of participants who are "insiders" to the conversation. Like all self-report measures, this suffers from the fact that people tend to report the socially desirable answer. Another approach is using perceptions of an "onlooker"; that is, judgments of the convergence of a dyad's nonverbal behavior (Bernieri et al., 1994). The chief limitation of this measure is that it may tap nonverbal behaviors that occur in face-to-face interaction but that have no relation to rapport or conflict decision making. Recent studies have found that insider and onlooker perceptions are correlated, indicating that they tap an underlying level of rapport (Bernieri et al., 1994). We follow the recommendation of Hendrick (1990) in combining these two kinds of measures to capture rapport.

## Method

### *Participants*

Forty-two Stanford University students participated in a study purportedly on the effects of communication media on performance in interviews. Participants understood they would be videotaped. Half of the participants were masters of business administration (MBA) students, and half were undergraduates. Each session involved one MBA student and one undergraduate. This was done to construct dyads of previously unacquainted students.

### *Procedure*

All sessions took place in a laboratory at Stanford's Graduate School of Business. Participants entered through separate doors at separate times and were not allowed to meet before the experiment began. Participants were assured beforehand that their only contact would be in the context of the mock interview and that they would leave the lab at separate times through separate doors.

*Conversation.* Participants were run in pairs and randomly assigned to one of two conditions: face-to-face or telephone. In the face-to-face condition, participants sat opposite each other separated by approximately 9 feet. In the telephone condition, participants sat in adjacent rooms and communicated through an intercom apparatus, which was described as a speakerphone. The telephone condition was designed to be ecologically valid, yet without any feature that would necessarily limit nonverbal expression (e.g., a hand-held telephone would limit manual gestures).

After signing a consent form and reading a set of instructions detailing the cover story of the experiment, participants were brought to their respective chairs and given 2 min to introduce themselves to each other (either face-to-face or by speakerphone). Then participants were given 5 min to discuss the topic of "positive experiences at Stanford." Specifically, each participant was asked to speak for 1 min about his or her positive experiences, and then the two were asked

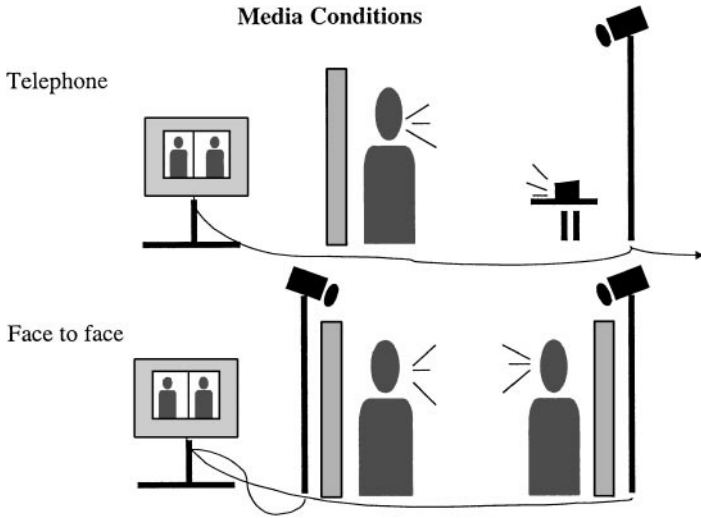
to engage in back-and-forth discussion of these experiences. The conversation was structured this way to avoid the possibility of one participant speaking for the entire time. Also, to ensure that participants had something to say, they were supplied with a list of sample questions (e.g., “Don’t you like the weather here?”) that could be consulted if necessary. These measures were justified to participants in terms of a cover story about job-interview skills.

*Self-report rapport measures.* After the conversation, participants were escorted from their interview chairs to cubicles in separate rooms where they were not videotaped or connected by speakerphone. To assess insiders’ perspective on dyadic rapport, participants were asked to respond to five questions about the conversation with scale ratings (1 = “Not much,” 7 = “Quite a lot”). Five questions were developed to target different aspects of rapport: “What level of rapport did you feel?”; “Did you feel that you understood what the other person was trying to express?”; “Did you feel that the other person understood what you were trying to express?”; “Did you feel ‘in synch’ or ‘on the same wavelength’ with the other person?”; and “Was it effortful to establish a harmonious feeling in the conversation?”

*Postconversation expectations.* Participants then completed (on a different page) measures relevant to the expectation-based account of the facilitatory effects of face-to-face contact. Participants were asked their perceptions and expectations of their counterpart. On 7-point bipolar scales, they rated the other person on the trait dimensions of agreeableness (items included disagreeable vs agreeable, uncooperative vs cooperative, cold vs warm, unkind vs kind, and selfish vs unselfish) and trustworthiness (untrustworthy vs trustworthy, noncredible vs credible, distrustful vs trustful). Then, participants indicated their expectations (ranging from 1 = “Not at all” to 7 = “Most likely”), in response to the following questions: “Would most people trust the other person if they met him in a competitive work setting?” and “Would most people be able to have a good working relationship with this person?”

*Conflict resolution task.* After making the scale ratings, participants were told that the job-interview study was complete. They were told that the experimental session also comprised a brief business decision-making game played against their interview counterpart for a monetary payoff. Instructions explained that the game was a “simplified version of a ‘real’ business dilemma” and modeled a small retail company’s decision to invest or not invest in advertising for a product sold by only one other small company. The payoff to advertising or not depended on what the other company does (i.e., on what the other participant decides). Instructions emphasized that cooperating would lead to a high joint outcome if the other player decides to cooperate but not if the other player decides to defect:

Advertising is expensive, so your company stands to benefit by “cooperating” with the other company (by not advertising) if and only if the other company cooperates (does not advertise). But your company stands to lose by cooperating if the other company “competes” (if the other company advertises and steals all the customers).



**FIG. 1.** Experiment 2 apparatus. In both conditions, participants were recorded from the same camera angles. The resulting split-screen videos were equivalent across conditions.

A matrix below the vignette summarized the structure of payoffs, which corresponded to the Prisoner's Dilemma game (Luce & Raiffa, 1954).<sup>2</sup> So that their task corresponded to a single-trial rather than a repeated game, instructions emphasized that the product in question would be offered for sale just once and that no future products would bring them into competition with this particular other company again. In addition to making a decision whether to cooperate or compete, participants were also asked to predict their counterpart's decision and to indicate their level of confidence in this prediction.

#### *Judge Ratings of Nonverbal Behavior*

"Onlooker" ratings of rapport and positive affect were obtained through a procedure like that used by Bernieri, Reznik, and Rosenthal (1988) in which judges coded dyadic patterns of nonverbal behavior in split-screen videotapes of the two participants in an interaction. In both conditions, frontal views of participants were recorded by video cameras mounted on 6-foot tripods 10 feet away (see Fig. 1 for an illustration of the apparatus). Unbeknownst to participants, the two cameras fed into a device that recorded a split-screen image with frontal

<sup>2</sup> Although the matrix expressed profits from the product in the tens of thousands of dollars, subjects were told that their actual payoff from the game would be 1/10,000th the payoff in the matrix. In the case of mutual defection, each participant received \$3. In the case of mutual cooperation, each participant received \$6. In the case of asymmetrical defection, the defector received \$9 and the cooperator \$1. Although participants believed that their payment for the session above a \$5 base level was contingent on the outcomes of games, a minimum payment of \$10 was made to each participant at the end of the session to reduce any "hard feelings." The average payment a participant received was \$12.

views of both participants. These split-screen images allowed external judges to assess the degree of convergence of facial, postural, and gestural movements of the two participants. Judges were shown a videotape with no audio track that displayed the first 2 min of each dyad's back-and-forth discussion. Importantly, these videotapes contained no indications that the communication media differed from dyad to dyad. We had ensured that there were no superficial cues to condition in the tapes by holding constant the chairs, background screen, lighting, camera angle, and so forth. When judges were queried after the coding session, they did not indicate a recognition that the communication media varied.

The instruction to two judges was that they would watch a series of 2-min segments of conversations between two students having a "get acquainted" conversation. It was explained that the tapes showed frontal views of the two students without sound so that judges could attend to the videotaped pairs' nonverbal behavior. The 21 video clips were shown to judges in a random order.

*Ratings of dyadic rapport.* Our index of rapport consisted of four items. Specifically, judges were instructed to rate four nonverbal patterns on 7-point scales: *Postural convergence*, *Gestural synchrony*, *Facial expression compatibility*, and *Facial expressions of mutual interest*. Instructions directed judges to pay attention to patterns of mutual adjustment or convergence in the pairs' nonverbal behavior:

A social interaction can be like a dance in which one person mirrors the movements and follows the tempo of the other person . . . the two persons adjust slightly to each others' styles. In the conversations you will watch, we want you to focus on to what degree each pair have synchronized various aspects of their nonverbal behavior. We want to distinguish the pairs who are "in synch" from those who are not. In past studies, raters have found this task initially quite alien and difficult, but they have mastered it fairly quickly.

Postural convergence was defined as the extent to which the students "position their bodies in relation to the other's movements," such as by simultaneously sitting upright or leaning forward. Gestural synchrony was defined as the extent to which the students "'mirror' the gesture that the other makes to indicate understanding," such as when people point or clap at the same time. Facial expression compatibility was defined as the compatibility of the simultaneous expressions of the two students. It was exemplified with the following contrast: Does one person laugh when the other smiles or laugh when the other person looks serious? Facial expression of mutual interest were defined as attentiveness to the other as well as interest and involvement.

*Ratings of individual positive affect.* Our index of positive affect consisted of three measures from Gross and Levenson's (1997) Emotional Behavior Coding System: Happiness, Pleasantness, and Smiles. This is a system for coding individual-level positive affect, so judges viewed only one half of the split-screen tape at a time. To rate Happiness (7-point scale), judges were asked to attend to mouth, cheek, and eye-wrinkle movements. Pleasantness was rated on a 5-point scale which asked judges to look for signs of negative or positive affect. To code

TABLE 3  
 Dyad Rapport as a Function of Media Condition (Experiment 2)

	Condition	
	Telephone	Face-to-face
Self-report ratings of rapport		
What level of rapport did you feel?	4.25	5.32***
Other person understood what you expressed?	4.95	5.50†
“In synch” or “on the same wavelength”?	4.65	5.55*
Index ( $\alpha = .88$ )	4.52	5.45*
Judge ratings of dyad rapport		
Postural convergence	3.76	4.50*
Gestural synchrony	3.33	4.23*
Facial expression compatibility	4.61	4.95
Facial expression of mutual interest	2.28	3.72**
Index ( $\alpha = .78$ )	3.67	4.35**
Combined summary score ( $\alpha = .83$ )	3.93	4.82**
( <i>N</i> )	(10)	(11)

Note. Asterisks indicate significant effects of condition.

†  $p < .10$ .

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .005$ .

Smiles judges simply counted the number of smiles that the person expresses during the 2-min segment.

## Results

### *Dyadic Rapport*

As expected, dyads who communicated in face-to-face conversation exhibited a higher degree of rapport than dyads who communicated by telephone. Rapport from the insider's perspective was assessed by self-report ratings of the two members of each dyad. A summary score was calculated from the first, third, and fourth items of the original five items, which formed a reliable scale both for MBA participants (Cronbach  $\alpha = .83$ ) and undergraduates (Cronbach  $\alpha = .65$ ).<sup>3</sup> Summary scores for the two participants in a dyad were highly correlated ( $r = .53, p < .02$ ) and were averaged to form dyad scores ( $\alpha = .88$ ). As Table 3 shows (upper part), self-reported rapport was significantly higher in the face-to-face condition than in the telephone condition.

<sup>3</sup> The second item, which queried whether participants felt they understood the other person, may have failed to tap conversation rapport because of the social desirability of an affirmative answer. The fifth item (intended as reverse-scaled item) may have failed to cohere because of tapping both the degree of harmony in the conversation and the effort required to establish that harmony.

Additionally, rapport from an external onlooker’s perspective was assessed with judge ratings of videotapes. A summary score for each judge was computed from the mean of their ratings of postural convergence, gestural synchrony, facial expression compatibility, and facial expression interest (Cronbach  $\alpha = .82$  for the first judge and  $.76$  for the second). Because summary scores of the two judges were highly correlated,  $r(20) = .68, p < .001$ , they were averaged to form external rapport scores for each dyad ( $\alpha = .78$ ). As Table 3 shows (lower part), onlooker perceptions of rapport were significantly higher in the face-to-face condition than in the telephone condition.

Following the suggestion that insider and onlooker perspectives are best combined, we examined the reliability of a scale incorporating the three self-report variables and the four judge-rating variables for each dyad and found it satisfactory ( $\alpha = .83$ ). On this combined measure there was a significant difference between the telephone ( $M = 3.93$ ) and face-to-face ( $M = 4.82$ ) conditions,  $F(1, 20) = 15.24; p < .001$ .

*Individual-Level Positive Affect*

As expected, individuals in the face-to-face condition exhibited more positive affect than individuals who communicated by telephone. Ratings were highly correlated across the three measures and across the members of a dyad. Hence, a summary score to capture the average judged positive affect in a dyad was calculated (Cronbach  $\alpha$  for first judge =  $.83$  and for second judge =  $.83$ ) and collapsing across judges ( $\alpha = .76$ ). As Table 4 shows, positive affect was significantly higher in the face-to-face condition ( $M = 2.82$ ) than in the telephone ( $M = 1.58$ ) condition,  $F(1, 20) = 8.37, p < .01$ .

*Expectations of One’s Counterpart*

Results provided little support for an expectation-based interpretation of effects of face-to-face contact. Although Table 5 reveals that attributions and expecta-

TABLE 4  
Positive Affect as a Function of Media Condition (Experiment 2)

Judged ratings of positive affect	Condition	
	Telephone	Face-to-face
Happiness	1.48	2.68*
Pleasantness	2.10	2.72**
Smiles	1.15	3.05**
Index ( $\alpha = .76$ )	1.58	2.82**
(N)	(10)	(11)

Note. Asterisks indicate significant effects of condition.

†  $p < .10$ .

\*  $p < .05$ .

\*\*  $p < .01$ .



TABLE 5  
 Postconversation Attributions and Expectations about the Counterpart

	Condition	
	Telephone	Face-to-face
Agreeableness		
Agreeable	5.85	6.18
Kind	5.30	5.36
Cooperative	5.65	5.82
Warm	5.15	5.32
Unselfish	4.85	5.00
Trustful	5.25	5.23
Index ( $\alpha = .84$ )	5.38	5.70
Trustworthiness		
Trustworthy	5.50	5.68
Fair	5.50	5.59
Credible	5.75	5.88
Index ( $\alpha = .81$ )	5.34	5.49
Expectations		
"Most people would trust him in a work setting"	5.35	5.36
"Most people would have good working relationship"	5.55	5.91

*Note.* No effects of condition were significant.

tions of the opponent are directionally more positive in the face-to-face condition, the difference did not approach significance in any trait rating or summary score. Likewise, differences between conditions did not approach significance in the expectation ratings. Hence, there is no support for the notion that expectations play a role in the facilitatory effect of face-to-face communication relative to telephone communication. In order for expectations to work as an alternative interpretation (or to work as a component of a rapport-based account), expectations would have to differ between the face-to-face and telephone conditions. Hence, these variables are not considered further.

### Outcomes

*Prisoner's dilemma game.* Effects of communication media on conflict-resolution outcomes were analyzed by treating dyads as datapoints. First, we analyzed the count of cooperation decisions in a dyad (i.e., 0, 1, or 2) and found more cooperation in the face-to-face ( $M = 1.55$ ) than telephone ( $M = .90$ ) conditions,  $F(1, 21) = 4.31, p = .05$ . Next, we analyzed the frequency with which dyads coordinated on the collectively optimal solution of mutual cooperation and found an even more striking effect of media condition. Dyads coordinated on mutual cooperation at a higher rate in the face-to-face (64%) than telephone (20%) conditions,  $\chi^2(1, 21) = 4.07, p < .05$ .

Following Baron and Kenny (1986), regression analyses were conducted to test the hypothesis that rapport mediates the effect of communication media on cooperation and to test the alternative view that positive affect is the mediating factor. Baron and Kenny require three separate regression equations for testing a mediating variable: (1) the independent variable (media condition) predicting the dependent variable (cooperation in the PD game); (2) the independent variable predicting the proposed mediating variable (rapport and positive affect, respectively); and (3) the independent variable and the proposed mediating variable simultaneously predicting the dependent variable. A mediation relationship exists if the first two regression equations show a significant relationship and if, in the third equation, the effect of the independent variable is eliminated while the effect of the mediating variable remains. This indicates that the effect of the independent variable runs through the mediating variable. Analyses were conducted separately with two formats of the dependent variable: the count of cooperation decisions in a dyad was an interval variable format (i.e., 0, 1, or 2) and dyad's success in coordinating on the collectively optimal outcome of mutual cooperation was a discrete variable format (1 = yes, 0 = no).

Although the first two steps of the Baron and Kenny procedure are regression tests corresponding to the ANOVA tests of condition effects reported above, it is worth reviewing the three steps in regression format: First, the independent variable (condition) significantly predicted the dependent variable (cooperation) in both its interval,  $B = .43, p < .05$ , and discrete,  $B = 1.95, p < .05$ , forms. Second, the independent variable (condition) significantly predicted the rapport index,  $B = .89, p < .001$ , and the positive affect index,  $B = 1.23, p < .01$ . The third and crucial test involving simultaneous regressions bears a more detailed presentation. In Table 6, we show regression equations in which the two versions

TABLE 6  
Testing the Role of Dyadic Rapport as a Mediator

Dependent variable	Predictors	Regression equations		
		1	2	3
Count (0, 1, 2) of cooperation decisions	Media condition	.43*	—	.02
	Rapport index	—	.70**	.61*
	Model $R^2$	.19	.40	.39
Mutual cooperation (1 = yes, 0 = no)	Media condition	1.95*	—	.32
	Rapport index	—	4.08*	4.18*
	Model $\chi^2$	4.25	11.80	11.56

*Note.* Condition is a dummy variable with the face-to-face condition coded as 1 and the telephone condition coded as 0. Unstandardized  $B$  statistics from linear and logistic regressions, respectively, are shown.

†  $p < .10$ .

\*  $p < .05$ .

\*\*  $p < .01$ .

TABLE 7  
Testing the Role of Individual-Level Positive Affect as a Mediator

Dependent variable	Predictors	Regression equations		
		1	2	3
Count (0, 1, 2) of cooperation decisions	Media condition	.43*	—	.36
	Pos. affect index	—	.22	.13
	Model $R^2$	.19	.11	.20
Mutual cooperation (1 = yes, 0 = no)	Media condition	1.95*	—	2.12†
	Pos. affect index	—	.36	-.13
	Model $\chi^2$	4.25	.82	4.33

*Note.* Condition is a dummy variable with the face-to-face condition coded as 1 and the telephone condition coded as 0. Unstandardized  $B$  statistics from linear and logistic regressions, respectively, are shown.

†  $p < .10$ .

\*  $p < .05$ .

of the dependent variable are predicted from the independent variable and the hypothesized mediating variable of rapport. Importantly, the coefficient on the rapport index remains significant in Eq. 3 while the coefficient on the independent variable does not. Further, a comparison of these coefficients to those in equations involving each predictor alone reveals that the coefficient on the independent variable is greatly reduced (compare Eq. 3 to Eq. 1), whereas the coefficient on rapport is not (compare Eq. 3 to Eq. 2), suggesting that the effect of the independent variable, media condition, runs through the mediating variable of rapport. In Table 7, we present a parallel set of equations with the positive affect index (rather than rapport) in the role of the mediating variable. The lack of a significant coefficient on the positive affect index in Eq. 3 disqualifies it as a mediating variable. Notice also that the coefficient on the independent variable is not greatly reduced by the addition of the positive affect index to the equation (compare Eq. 3 to Eq. 1)—another indication that the influence of media condition is not mediated by positive affect. In sum, analyses following the Baron and Kenny procedure lend support to the hypothesis that rapport is a mediating variable and not to the alternative interpretation that positive affect is the mediating variable.

*Predictions about counterpart's decision.* The predictions about counterparts made after the conflict resolution task provide another measure of participants' expectations and hence allow another test of the alternative interpretation that face-to-face contact facilitates mutual cooperation by raising participants' expectations of each other. As with the earlier expectation measures, results fail to support a role of expectations. Even though face-to-face participants cooperated more, they were not significantly more likely to predict their counterpart cooperated. In a comparison of the number of predicted cooperation decisions per dyad (0, 1, or 2), there was no significant difference between the face-to-face ( $M = 1.55$ )

and telephone ( $M = 1.20$ ) conditions,  $F(1, 21) = 1.87, p > .10$ . Nor was the average level of confidence about these predictions higher in the face-to-face ( $M = 70.6$ ) than in the telephone ( $M = 69.4$ ) conditions  $F(1, 21) = .00, p > .10$ .<sup>4</sup> In sum, results provide no support for the hypothesis that expectations play a role in the facilitatory effect of face-to-face contact.

## Discussion

Like Experiment 1, Experiment 2 provides evidence that face-to-face contact enables negotiators to coordinate on mutually beneficial conflict-resolution outcomes. Additionally, Experiment 2 greatly elucidates the mechanism linking face-to-face contact and decisions to cooperate. Two independent measures of rapport indicate that it rises with face-to-face contact, and a summary rapport score mediates effects of the manipulation on the conflict-resolution outcome. Although positive affect was higher in the face-to-face than telephone condition, positive affect did not mediate effects of face-to-face contact on decisions to cooperate. Expectations of the counterpart's cooperativeness played no role, either as an alternative mechanism or as a by-product of rapport.

An important methodological feature of Experiment 2 is that negotiators did not know that they would be playing a conflict game when they held their conversation. The finding that conversation rapport impacted an unanticipated conflict-resolution decision suggests that rapport causally influences conflict resolution; it cannot be explained by the alternative interpretation that a goal of efficient conflict resolution is a third variable that produces rapport during the conversation and mutual cooperation afterward. However, notwithstanding the value of this method for isolating the effect of rapport, this method may have minimized the role of expectations. Since participants did not expect to negotiate when they conversed, they may not have sought to make relevant attributions of their counterpart. By contrast, when individuals enter an interaction expecting an immanent negotiation they may bring the interaction goal of learning as much as possible about the counterpart's cooperativeness (see Neuberg & Fiske, 1987). In such cases, expectations of the counterpart might provide an independent mechanism for facilitatory effects of face-to-face contact.

<sup>4</sup> Further exploration of predictions about counterparts uncovered a striking pattern that although unpredicted, seems consistent with our rapport account of media affects. To assess the subjective perception of coordination, we analyzed whether participants predicted their counterpart matched their decision in the mixed-motive game. First, we counted the number of predicted matches per dyad (0, 1, or 2), and we found a higher level in the face-to-face ( $M = 2.00$ ) than the telephone conditions ( $M = 1.50; F(1, 2) = 9.95, p > .005$ ). Second, we examined the rate of mutual perceptions of a match (i.e., scores of 2) and found a sharp pattern (100% of dyads vs 50%;  $\chi^2(21) = 7.22, p < .01$ ; Fischer's exact test  $p < .02$ ). These results suggest that participants in the face-to-face condition had the impression that the two players coordinated, whereas those in the telephone condition were more likely to think that one of the two players was a "sucker," an unreciprocated cooperator.

## GENERAL DISCUSSION

Two experiments have provided support for our proposal that the visual access to nonverbal behavior in face-to-face interaction enables the development of rapport and thereby fosters mutually beneficial settlements to mixed-motive conflicts. The two experiments differ in method and consequently provide complementary kinds of evidence. In Experiment 1, face-to-face dyads endured less costly delay in settling a strike than dyads who stood side-by-side. Although face-to-face and side-by-side dyads started the strike just as far apart in their aspirations, the former dyads were able to coordinate more quickly on an intermediate settlement and thereby avoid strike costs. Although this effect of visual access in Experiment 1 is strong by the criterion of internal validity (the rapport manipulation used in Experiment 1 was minimal and produced a strong effect), the evidence is not as strong by the criterion of external validity (the communication conditions in Experiment 1 do not reflect those typically used for negotiation in the real world). Experiment 2 employed a more naturalistic, externally valid, and nontransparent manipulation of access to nonverbal behavior. We observed higher rates of mutual cooperation after a face-to-face interaction than a telephone interaction. Moreover, we found that a measure of conversation rapport mediated the effect of the manipulation. Given that people often face a choice between talking in person or talking by telephone in everyday contexts of negotiation, our laboratory findings are especially applicable. Our findings suggest the prescription that negotiators in a conflict with potentially mutually beneficial outcomes should interact face-to-face.

Several alternative explanations for the facilitatory effect of face-to-face interaction have also been tested. In Experiment 1, we found no support for the interpretation that the anticipation of face-to-face interaction reduces negotiator aspirations. In Experiment 2, we found no support for alternative interpretations in terms of negotiators' individual-level positive affect or expectations. Our confidence in the rapport hypothesis has been strengthened by the results of a subsequent set of studies. The link between measures of dyad rapport and coordination in conflict resolution has been replicated in studies of complex negotiation tasks both with novice and expert negotiators as participants (Morris & Drolet, 1999).

### *Implications*

The current experiments contribute to the emerging literature on rapport in interactions. Experiment 2 replicates the association between measures of dyadic rapport in self-reports and in external ratings of nonverbal convergence (Bernieri et al., 1994). Yet, Experiment 2 goes beyond previous works in identifying an *antecedent* of rapport (i.e., visual access to nonverbal behavior) and a *consequence* of rapport (i.e., coordination on mutually beneficial conflict outcomes).

Additionally, the current experiments contribute to the resurgent social psychological perspective on conflict and negotiation (Thompson, 1998). One research program in this movement has examined the influence of preexisting relationships

on negotiations (e.g., Valley, Neale, & Mannix, 1995). Our research program looks at the other side of the coin, the question of how relationships are formed in negotiations.

A final topic informed by the current studies is the practical question of how negotiations are affected by communication media. We have reviewed a number of prior studies observing that negotiations are more likely to proceed positively and productively with communication face-to-face rather than by telephone, and the current research has elucidated the role of rapport in underlying this effect. Other communication media studies have included text-based media, such as e-mail, and observed a level of discord and inefficiency even worse than that with telephone (Sproull & Kiesler, 1991; Valley et al., 1998). A generalization suggested by these findings is as follows: The less a medium allows for synchronous, multiple-channel expression of emotion, the less it will foster rapport.

However, it would be a mistake to conclude from experiments manipulating media conditions that some media, for instance e-mail, are inherently limited in their potential. There is a continual evolution to the technological flexibility of such media and to the social conventions governing their use. Minor changes may have large effects. If rapport is a crucial ingredient for negotiation success, then slight changes to e-mail that support rapport may redress its limitations. Several recent tests support this hypothesis. Morris, Nadler, Thompson, and Kurtzberg (1999) varied whether e-mail negotiations were preceded by a brief get-acquainted telephone conversation and found that the rapport created in the brief telephone conversation was sustained throughout the long e-mail negotiation, resulting in better outcomes. Similarly, Moore, Kurtzberg, Thompson, and Morris (1999) found that inducing mutual self-disclosure in an e-mail conversation (through exchange of photographs, personal information, and emotion symbols) fostered rapport and successful outcomes. They also found that negotiations with in-group members—where a basis for trust already exists—proceed amicably and productively over e-mail. In short, our investigation of the rapport hypothesis not only has provided insight into previously identified communication media effects but also into strategies for overcoming weaknesses of particular media.

### *Issues for Future Research*

The current research has tried to answer the question of why negotiators in generally positive relationships seek face-to-face communication. We proposed that face-to-face contact enables coordination on mutually beneficial outcomes by fostering rapport. Although the current research has provided evidence for the existence of this proposed causal process, it has not explored the moderating conditions for this process. That is, *when* is rapport likely to develop? The situational and personality factors that have been shown to moderate other forms of emotional contagion (Doherty, 1997; Gump & Kulik, 1997) are likely to be relevant to rapport as well.

Although many factors may moderate the level of rapport created in a

conversation, a larger issue is when interpersonal dynamics in face-to-face negotiations take a form qualitatively different from rapport. Negotiation involves a number of social emotions that hinge on nonverbal exchange and hence escalate in face-to-face interactions (for a theoretical review, see Morris & Keltner, in press). Evidence from past studies of bargaining in a competitive climate suggest that face-to-face interaction can foster dominance dynamics that engender distributive tactics (e.g., Lewis & Fry, 1977). The role of nonverbal behaviors in interpersonal dominance dynamics has been thoroughly demonstrated (see Dovidio & Ellyson, 1985; Dovidio, Ellyson, Keating, Heltman, & Brown, 1988). Unlike rapport, the dominance dynamics in an interaction are often asymmetric, with one party dominating and the other deferring. Drawing on this research, we have found in recent work that dominance and rapport dynamics in a negotiation can be independently measured and have distinct consequences. Whereas dyadic rapport is related to joint outcome or the integrative dimension of negotiation, dominance differentials in a dyad appear to be related to differential outcomes or the distributive dimension of negotiation (Morris & Drolet, 1999).

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