Field Testing Integrative Negotiations

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Of the numerous studies conducted on negotiations, almost all of them have focused on distributive negotiations. The study of integrative negotiations (compared with the study of distributive negotiations) has been relatively neglected due to the lack of (a) conceptual clarity about the nature of integrative negotiations, (b) a theoretical framework, (c) a procedure for engaging in integrative negotiations, and (d) limitations of the existing research. Integrative negotiations may be seen as a cooperative process and distributive negotiations as a competitive process. Thus, social interdependence theory provides the framework for clarifying the nature of integrative negotiations and operationalizing a procedure for its use. There have been a series of studies on integrative negotiations that validate the link between social interdependence theory and integrative negotiations, expand the number of dependent variables that are included in the research on integrative negotiations, and increase the generalizability of the research on integrative negotiations. Subsuming integrative negotiations under social interdependence theory enables researchers to define and refine more precisely the concept of integrative negotiations, summarize the existing research on integrative negotiations, generate more and guide the research on integrative negotiations, and clarify the significance of research findings. Subsuming integrative negotiations under social interdependence theory also provides practitioners guidance as to how to more precisely create and refine operational integrative negotiation procedures and more precisely implement them.

When faced with a conflict of interests, a common form of conflict resolution is negotiation. Negotiation is a process by which persons who have shared and opposed interests, and want to come to an agreement, try to work out a settlement (Johnson & Johnson, 1978). Broadly, there are two approaches to negotiation: distributive (where the goal is to make an agreement more favorable to oneself than to the other negotiators) and integrative (where the goal is to make an agreement that benefits

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everyone involved). Of the empirical studies that have been conducted on negotiations, almost all focus on distributive negotiations (Bazerman, Curhan, Moore, & Valley, 2000). Thus, a great deal is known about the use of strategies in distributive negotiations (such as by making an extreme opening offer and adopting a slow rate of compromise) and the situational variables influencing distributive negotiations (such as the presence of constituencies, deadlines, power, and incentives). Comparatively few studies have been conducted on integrative negotiations.

To investigate empirically the efficacy of integrative negotiations, there are a number of issues that need to be resolved. First, there is some conceptual confusion about the nature of integrative negotiations. Some clarification is needed. Second, integrative negotiations are commonly discussed disconnected from theory. Integrative negotiations need to be placed within a theoretical framework that will help clarify its nature and illuminate operational procedures practitioners can use. Social interdependence theory provides the framework for understanding integrative negotiations. Third, specific procedures for engaging in integrative negotiations have not been specified and validated by research. In the past, the focus has been more on investigating the components of integrative negotiations rather than a procedure as a whole. Practitioners need a validated procedure they can use in "real-world," applied settings. Fourth, there are a number of limitations in the research on integrative negotiation related to its scarcity. There is an absence of research linking social interdependence theory and integrative negotiations. Only a few dependent variables have been focused on, primarily documenting the outcomes of integrative negotiations, not the processes. The research lacks generalizability due to its being conducted primarily in psychological laboratories and using college students as participants. The purpose of this article is to attempt to resolve these issues.

CONCEPTUALIZATIONS OF INTEGRATIVE NEGOTIATIONS

The first issue addressed is the conceptual confusion as to the nature of integrative negotiations. Integrative negotiations were initially discussed by Follett (1940) and conceptualized principally within the field of labor negotiations (e.g., Slichter, Healy, & Livernash, 1960; Walton & McKersie, 1965). Like the blind men trying to describe an elephant, however, the social scientists who have written about integrative negotiations have focused on different aspects of its nature. Johnson (1967) focused on integrative issues, which allow for an agreement that will benefit everyone. Walton and McKersie (1965) and Johnson and Johnson (1978) focused on integrative goals, which are the desire to make an agreement that benefits everyone involved. Pruitt (1981) focused primarily on integrative agreements, which maximize the joint outcomes of participants. Blake and Mouton (1964), Johnson (1991),

Thomas (1976), Rubin, Pruitt, and Kim (1994), and others have focused on the conditions under which integrative negotiations should be used (i.e., when the goal and the relationship are both important); this is known as the dual-concerns theory of conflict. Johnson (1967, 1971, 1972) and Johnson and Johnson (1978) focused on the behaviors and skills that increased the likelihood of an integrative agreement in negotiations. This multiple approach to integrative negotiations has resulted in some conceptual confusion as to the nature of integrative negotiations, and a lack of additivity among the research findings. To develop a more coherent conceptualization of integrative negotiations, it is helpful to place it within the context of social interdependence theory.

Social Interdependence Theory

Social Interdependence Theory provides a framework that allows us to summarize the existing research, generate new research, and develop a procedure for integrative negotiations tied into a broader edifice of knowledge (Deutsch, 1949, 1962; Johnson, 1970; Johnson & Johnson, 1989). *Social interdependence* exists when the accomplishment of each individual's goals is affected by the actions of others. There are two types of social interdependence, positive (cooperative) and negative (competitive). *Positive interdependence* exists when individuals perceive that they can reach their goals if and only if the other individuals also reach their goals and, therefore, promote each other's efforts to achieve the goals. *Negative interdependence* exists when individuals perceive that they can obtain their goals if and only if the other individuals fail to obtain their goals and, therefore, obstruct each other's efforts to achieve those goals.

The basic premise of social interdependence theory is that the way in which interdependence is structured determines how individuals interact, and the interaction pattern determines the outcomes of the situation (Deutsch, 1949, 1962; Johnson, 1970; Johnson & Johnson, 1974, 1989, 2002). Positive interdependence results in promotive interaction (such as mutual assistance and trust), negative interdependence results in oppositional or contrient interaction (such as obstruction of each other's goal achievement efforts and distrust), and no interdependence results in the absence of interaction. The psychological processes created by positive interdependence and the resulting promotive interaction include substitutability (i.e., the degree to which actions of one person substitute for the actions of another person), inducibility (i.e., openness to being influenced and to influencing others), and positive cathexis (i.e., investment of psychological energy in objects outside of oneself). In operationalizing cooperative efforts, besides positive interdependence and promotive interaction, it is necessary to structure individual accountability, the appropriate use of social skills, and group processing.

Both distributive and integrative negotiations may be viewed as processes of social interdependence. *Distributive negotiations* may be seen as a competitive situation in which individuals seek to "win" by reaching an agreement that is favorable to them and unfavorable to the other. The assumption is that the issue is a zero-sum conflict in which individuals' goals are negatively correlated. Gains for one person translate into equal losses for the other. The other negotiator is viewed as an adversary who must be defeated if one is to reach one's goal. The objective of distributive negotiations is the maximization of unilateral gains, and each person tries to maximize self-gain and obtain the largest possible share of a fixed pie. Negotiators engage in such tactics as withholding information (e.g., the party's bottom line), misleading communication, making firm commitments to positions (a.k.a. "power positioning"), and making overt threats. Negotiators interact with each other as though they have no past history or future relationship.

Integrative negotiations may be seen as a cooperative situation in which individuals seek an agreement that benefits everyone involved. The assumptions are that the issue allows for joint gain and an individual's goals are positively correlated. Gains for one person translate into equal gains for the other. The other negotiator is viewed as a collaborator who is part of a joint search for a fair agreement that meets the interests of all sides. The objective of integrative negotiations is to maximize mutual benefits, and each person tries to expand the pie to ensure everyone's goals will be met to the greatest extent possible. Negotiators engage in such tactics as sharing all relevant information, open and accurate communication, focusing on interests not positions, seeing the issue from all perspectives, and creativity in identifying possible agreements. Negotiators interact with each other as though there is an ongoing relationship with a past and future that must be maintained in good working order.

Besides the nature of integrative negotiation linking it to positive interdependence and social interdependence theory, the process and outcomes promoted by integrative negotiations provide additional links. In terms of outcomes, cooperation (compared with competition) tends to result in more successful achievement of the goals, greater learning and retention, more positive attitudes toward the experience, and greater transfer of what is learned to other relevant situations (Johnson & Johnson, 1989). Therefore, the more integrative the negotiations, the more frequently an agreement is reached, the more the agreement maximizes joint outcomes, the greater the learning and retention of the negotiation procedure, the greater the transfer to other relevant situations, and the more positive the attitudes toward conflict. If such findings are found, then we may conclude that both cooperation and integrative negotiations result in the same outcomes and, therefore, integrative negotiation may be one type of cooperative endeavor.

In terms of processes, the basic premise of social interdependence theory is that positive interdependence will result in promotive interaction, which in turn results in cooperation. Negative interdependence, on the other hand, will result in

oppositional or contrient interaction, which in turn results in competition (Deutsch, 1949, 1962; Johnson & Johnson, 1974,). Promotive interaction is characterized by such dynamics as (a) open and honest communication of relevant information (such as a person's wants, feelings, and interests), (b) accurate perceptions of the other person and the other person's actions (obtained through taking the other's perspective), (c) trust in and liking for the other person, and (d) the recognition of the legitimacy of the other's interests and a search for a solution accommodating the interests of both sides (Deutsch, 1973; Johnson, 1971; Johnson & Johnson, 1989). Competition, on the other hand, tends to promote (a) the avoidance of communication or the communication of misleading information and threats; (b) misperceptions and distortions of the other person's position and motivations; (c) suspicious, hostile attitudes that increase readiness to exploit the other's wants and interests; and (d) the denial of the legitimacy of others' wants, feelings, and interests and a search for a solution that benefits oneself at the expense of the other. Thus, it may be hypothesized that integrative negotiations will be characterized by promotive interaction in which participants communicate accurately, take the other's perspective, and create possible agreements aimed at maximizing joint gain.

Integrative Negotiations Procedure

The third issue addressed is the need for a procedure for engaging in integrative negotiations. Generally, the research on integrative negotiations has been of limited use for enhancing the effectiveness of integrative negotiation practice (Bazerman et al., 2000). Numerous social scientists, beginning with Follett (1940), have focused on using a problem-solving procedure (i.e., identifying the problem, formulating alternative solutions, deciding on which one to adopt, and implementing the agreed on solution) to achieve integrative resolutions of conflicts. Fisher and Ury (1981), although not presenting a procedure, propose a set of guidelines: not bargaining over positions, separating people from the problem, focusing on interests not positions, inventing options for mutual gain, and insisting on objective criteria in creating an agreement. It is unclear, however, whether training in the use of these guidelines will increase individuals' ability to negotiate integrative agreements (Ryan, 1990). Four guidelines are also proposed in the Conflict Resolution Model (Littlefield, Love, Peck, & Wertheim, 1993; Wertheim, Love, Littlefield, & Peck, 1992): develop expectancies for win–win solutions, identify each party's interests, brainstorm creative options, and combine options into win–win solutions. Support for the efficacy of these guidelines has been presented by Davidson and his colleagues (Davidson & Versluys, 1999, 2000; Feeney & Davidson, 1996). Although such models and guidelines help in describing integrative negotiations, there is still a need to specify a step-by-step procedure and validate its effectiveness.

It should be noted, however, that even without an agreed on procedure, the implementation of various aspects of integrative negotiations has become so widespread in education, counseling, personnel management, and business settings, that a significant gap has been created among theory, research, and practice (Cobb, 1991; Katz & Thorson, 1988; Lewicki, Weiss, & Lewin, 1992; Littlefield et al., 1993; Martin, 1988; Pruitt, 1986). The proliferation of conflict resolution training programs, largely nontheoretical and focused on teaching problem-solving procedures or communication skills, has been based on the intuitive appeal of learning how to manage conflicts more skillfully and anecdotal evidence substantiating the programs' effectiveness. The empirical evaluations that have been conducted predominantly indicate that conflict resolution behavior improves following training (Feeney & Davidson, 1996; Maher, 1986; Wood & Davidson, 1993), although some studies indicate no significant improvements (Mulvey & Reppucci, 1981; Ryan, 1990).

There are at least two problems with these studies. First, the studies have tended to focus on the effects training had in resolving future conflicts rather than examining the nature of the conflict resolution procedures. There have been few attempts to discover what components of the conflict resolution procedure actually affect the constructiveness of the resolution of conflicts. Second, there have been few attempts to formulate a theoretical model from which to build training programs and evaluate the resulting prescriptive principles and practices (Pruitt, 1986). The theoretical nature of most of the training programs makes it difficult to compare their relative merits and arrive at some conclusion as to the degree of effectiveness of the conflict resolution processes.

When social interdependence theory is used as a conceptual base, however, it is possible to posit that within a conflict situation, integrative negotiation is a form of promotive interaction that may be characterized as consisting of six steps (Johnson, 1967, 1971, 1972, 1991; Johnson & Johnson, 1978; Johnson & Johnson, 1984, 1995). The first two steps of the procedure are defined on the basis of the research indicating the need to reach a shared understanding of the exact nature of the conflict. There is evidence, for example, that more integrative agreements are reached when the conflict is defined as a small and specific issue (rather than large and general; Deutsch, Canavan, & Rubin, 1971), the conflict is defined as a problem to be solved rather than as a test of dominance (Blake & Mouton, 1962; Deutsch, 1973; Deutsch & Lewicki, 1970), and feelings are accurately communicated (DeCecco & Richards, 1974). Thus, negotiators must accurately describe what they want and how they feel to create a joint definition of the conflict as a small and specific problem to be solved.

The third step in the procedure is describing the reasons underlying negotiators' wants and feelings so that interests as well as positions are clear (Johnson & Johnson, 1978; Johnson & Johnson, 1995). More integrative agreements are reached when negotiators make descriptive rather than evaluative statements (Johnson,

1972, 1974), express warmth rather than coldness or anger (Johnson, 1971), express cooperative intentions (Johnson, 1971, 1974; Johnson, McCarty, & Allen, 1976), and adopt a "team" orientation that defines the other parties as collaborators (Pruitt, 1981). There is also evidence that distributive actions (such as threats, demands, positional commitments, status slurs, and extraneous arguments for one's offers) are negatively correlated with reaching an integrative agreement (Deutsch & Krauss, 1960, 1962; Pruitt, 1981). The more clearly the reasons underlying a person's wants and feelings are understood, the easier it is to create integrative agreements.

The fourth step in the negotiating procedure is taking the perspective of the other disputant in integrative negotiations. There is considerable evidence that more integrative agreements are reached when participants take the opponent's perspective and attempt to understand how the conflict appears from the opponent's frame of reference (Johnson, 1967, 1971).

The fifth step is engaging in creative reasoning and synthesis to identify several different optional agreements that maximize joint gain (Johnson & Johnson, 1979, 1995). Follett (1940) emphasized inventing creative options that allow all parties to obtain what they want. Doing so is not always easy. In many cases, negotiators have a bias toward seeing their positions as directly opposed, even when integrative agreements are possible (Johnson, 1967). Simon (1976) noted that in conflicts people often fixate on the first reasonable agreement thought of, which he called "satisfying," rather than generating a number of optional agreements which allow disputants to create an agreement that maximizes the benefits to everyone concerned. The distributive and satisfying biases may be overcome by engaging in heuristic trial-and-error (frequent varying of proposals in seeking an agreement; Pruitt, 1981), using problem-solving strategies (Deutsch & Krauss, 1962; Pruitt, 1981), and following instructions to maximize the quantity and variety of alternatives while deferring judgment. Buyer (1988) found that such procedures generate a greater number of higher quality agreements than no instructions or alternative approaches.

Finally, the sixth step in the negotiating procedure is deciding which optional agreement to adopt. Agreements tend to be more stable when they include steps to reestablish cooperation if the agreement is broken (Deutsch, 1962, 1973).

The use of these six steps in negotiation procedure represents a promotive interaction pattern that ties integrative negotiations to social interdependence theory. It may be expected, therefore, that the more disputants engage in the integrative negotiation procedure, the more positive will be the outcomes of negotiation. More specifically, in investigating the efficacy of the proposed integrative negotiation procedure, the questions that may be asked are as follows:

1. When a conflict appears, will the steps of the integrative negotiation procedure be recalled? It is not only whether the procedure is learned, but whether it can be recalled under appropriate circumstances.

2.   Will the recall of the steps of the integrative negotiation procedure under appropriate circumstances (during the occurrence of a conflict) be retained over time? Because it will prove helpful in resolving conflicts constructively, and creating positive outcomes from conflicts, individuals should remember how to engage in the procedure.

3.   In a conflict, will individuals actually engage in the integrative negotiation procedure? It is not only whether the procedure is learned, but whether the person actually engages in the necessary actions to perform the procedure.

4.   Will the ability to engage in the steps of the integrative negotiation procedure be retained over time?

5.   Will trained individuals reach more integrative agreements than will untrained individuals? In resolving their conflicts, will individuals trained in the integrative negotiation procedure seek more cooperative agreements that maximize joint gain when placed in a situation in which they can engage in either a distributive or an integrative negotiation procedure?

6.   Will individuals trained in the integrative negotiation procedure transfer the integrative negotiation procedure to other settings?

7.   Will individuals trained in the integrative negotiation procedure develop more positive attitudes toward conflict than will untrained individuals?

8.   When the integrative negotiation procedure is integrated into academic units, will academic achievement increase?

Limitations of the Research on Integrative Negotiations

The fourth issue addressed is the limitations of the research on integrative negotiations. The first limitation is the sparsity of research. Certainly, there have been investigations of integrative issues and agreements. In the 1950s and 1960s, Deutsch (1962, 1973), for example, used the Prisoner's Dilemma and the Acme-Bolt Trucking games to investigate integrative versus distributive agreements and strategies. In the 1960s, Johnson (1967, 1971) conducted a series of studies in which participants negotiated either a distributive or an integrative issue. In the 1970s, Pruitt (1981) and his associates conducted a number of studies in which participants negotiated an issue that allowed for either a distributive or an integrative agreement. There have also been studies on the dual-concerns theory of conflict (Johnson & Johnson, 1978; Rubin et al., 1994). Although the results of these studies are interesting and can be related to each other, they do not sum together in a coherent framework or validate a procedure for practitioners to use.

The second limitation of the research on integrative negotiations is that it has primarily focused on the agreements reached. This limited focus ignores other important dependent variables, such as the learning of information about the issue be-

ing negotiated, the attitudes toward conflict generated by the negotiating experience, the mastery of the integrative negotiation procedure, the propensity to engage in integrative negotiations in the future, and the ability to resolve future conflicts constructively.

The third limitation is the lack of generalizability of the existing research. The previous research is largely homogeneous in age of participants (primarily college students), ethnicity of participants (primarily White individuals), socioeconomic class of participants (primarily middle class), setting in which the research was conducted (primarily psychological laboratories), and the duration of the studies (usually 1 hour or so). By conducting long-term research in field settings with participants who are different ages, more diverse ethnically and in terms of socioeconomic class, and from more than one country, the findings will add generalizability to what is known about integrative negotiations.

METHOD OF THE INTEGRATIVE NEGOTIATIONS STUDIES

A recent meta-analysis of 16 studies on integrative negotiations provides the data to determine whether the processes and outcomes expected from cooperation result from engaging in integrative negotiations (Johnson & Johnson, 2002). The nature of these studies is described later (see Table 1).[1]

Participants

Participants came from eight different schools in two different countries and were from kindergarten through the ninth grade (see Table 1).

Independent variable.   The independent variable was the presence versus the absence of a conflict resolution training program entitled, "Teaching Students To Be Peacemakers" (TSP; Johnson & Johnson, 1995). In the experimental condition, students participated in the TSP program. It is a 12-year spiral program in which each year students learn increasingly sophisticated integrated negotiation and mediation procedures. Although the research on the TSP program has been conducted in the United States and Canada, the TSP program has also been instituted in schools in Europe, Asia, Central and South America, the Middle East, and Africa. The TSP program is implemented by (a) creating a cooperative context (pri-

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[1]The references for these studies may be found at the end of the References section.

TABLE 1
Summary of Conflict Resolution and Peer Mediation Studies

Study	Year	Setting	School	Grades	Training Length	Sample Size	Control	Randomization	Teacher Rotation
Johnson, Johnson, & Dudley	88–89	Suburban	Cornelia Elementary, Edina, MN	1–6	15 hours, 30 days	138 (WC)	Yes	Control classes randomly selected	Yes
Johnson, Johnson, Dudley, Acikgoz	90–91	Suburban	Highlands Elementary, Edina, MN	1–6	15 hours, 30 days	92 (WC)	No	Classes randomly selected	Yes
Johnson, Johnson, Dudley, Magnuson	91–92	Suburban	Creek Valley Elementary, Edina, MN	2–5	9 hours, 15 days	227 (WC)	Yes	Classes randomly selected	No
Johnson, Johnson, Dudley, Ward, Magnuson	91–92	Suburban	Creek Valley Elementary, Edina, MN	2–5	9 hours, 15 days	227 (WC)	Yes	Classes randomly selected	No
Johnson, Johnson, Mitchell, Cotten, Harris, Louison	91–92	Urban	Miller Park Elementary Omaha, NE	3–4	10 hours, 1.5 days	47 (Cadre)	No	None	na
Johnson, Johnson, Cotten, Harris, Louison	92–93	Urban	Miller Park Elementary, Omaha, NE	3–4	10 hours, 1.5 days	39 (Cadre)	No	None	na
Johnson & Johnson	93–94	Urban	Miller Park Elementary, Omaha, NE	3–4	10 hours, 1.5 days	34 (Cadre)	No	None	na

(Continued)

Authors	Year	Setting	School/Location	Grade	Duration	N		Assignment	
Johnson, Johnson, Dudley, Mitchell, Fredrickson	93–94	Suburban	Valley View Middle School, Edina MN	6–9	14 hours, 12 weeks	235 (WC)	Yes	Control classes randomly selected	Yes
Dudley, Johnson, Johnson	93–94	Suburban	Valley View Middle School, Edina, MN	6–9	14 hours, 12 weeks	235 (WC)	Yes	Control classes randomly selected	Yes
Stevahn, Johnson, Johnson, Green, Laginski	93–94	Rural, Suburban, Canada	Durham High School, Ontario	9	9.5 hours, 2 weeks	40 (WC)	Yes	Students assigned to conditions	Yes
Stevahn, Johnson, Johnson, Real	94–95	Rural, Suburban, Canada	Durham Region K–8, Ontario	7–8	23 hours, 4 weeks	111 (WC)	Yes	Students assigned to conditions	Yes
Stevahn, Johnson, Johnson, Laginski, O'Coin	94–95	Rural, Suburban, Canada	Durham High School Ontario	9	10 hours, 4 weeks	42 (WC)	Yes	Students asssigned to conditions	Yes
Stevahn, Johnson, Johnson, Schultz	95–96	Suburban	Mount Diablo, HS Concord, CA	9	17 hours, 3 weeks	92	Yes	Classes assigned to conditions	No (same)
Stevahn, Johnson, Johnson, Oberle, Wahl	96–97	Suburban	Highlands Elementary, Edina, MN	K	9 hours, 4 weeks	80	Yes	Students assigned to conditions	Yes
Stevahn, Munger, Kealey	97–98	Suburban	Dorval, Quebec	K–6	6 Months	302	No	None	No
Stevahn, Oberle, Johnson, & Johnson	99–00	Suburban	Highlands Elementary, Edina, MN	K	6 hours, 2 weeks	38	Yes	Students assigned to conditions	Yes

Note. HS = high school; K = kindergarten; WC = whole class.

marily by using cooperative learning the majority of the time; Johnson, Johnson, & Holubec, 1998), (b) teaching that conflicts are often desirable and not to be avoided, (c) teaching the integrative negotiation procedure, (d) teaching the peer mediation procedure, (e) implementing the peer mediation program, and (f) continuing the training in the negotiation and mediation procedures throughout the year.

The integrative negotiation procedure consists of six steps: (a) stating what you want, (b) stating how you feel, (c) stating the reasons underlying your wants and feelings, (d) reversing perspectives, (e) generating at least three optional integrative agreements, and (f) agreeing on which one to implement. The peer mediation procedure consists of four steps: (a) ending the hostilities, (b) ensuring commitment to mediation, (c) facilitating integrative negotiations, and (d) finalizing the agreement. These procedures are described in detail in Johnson and Johnson (1995). In the 16 studies conducted on the TSP program, the training of students lasted from 9 to 15 hours (see Table 1).

In the control condition, students did not receive the TSP training. Eleven of the studies involved control groups. In seven of the studies, classrooms or controls were selected randomly from the school; in four studies students were assigned randomly to conditions. In nine of the studies, teachers were rotated across conditions. In both the experimental and control groups, teachers were trained to follow daily scripts and groups were observed daily to ensure that the conditions were implemented correctly and consistently.

Dependent measures.   Not every dependent variable was assessed in every study and different versions of a dependent version were used in different studies. The first dependent variable was the ability to recall the integrative negotiation procedure in conflict situations. The "How I Manage Conflicts" measure was aimed at assessing students' total recall of the steps in the negotiation procedure in a conflict situation. Students were asked to write out step-by-step how they would resolve a conflict. Responses were scored for the presence of the six steps of the negotiation procedure. Retention was measured anywhere from 3 weeks to 1 year after the training had ended.

The second dependent variable was the long-term retention of the ability to recall the integrative negotiation procedure in conflict situations. The "How I Manage Conflicts" measure was readministered anywhere from 3 weeks to 1 year after the training had ended. Responses were scored for the presence of the six steps of the integrative negotiation procedure.

The third dependent variable was the strategy used to resolve actual conflicts. Three measures were used to measure the strategies students used in managing their conflicts. The first measure was the Conflict Report form, on which students recorded the conflicts in which they were involved. The information requested was the date of the conflict, the names of persons involved, and a description of what

the conflict was about, the procedure used to resolve the conflict, and the agreement reached. In addition, teachers kept a record of all conflicts students brought to them to resolve.

The second measure of strategies used to resolve a conflict was the "Conflict Scenario" measure, in which students were asked to respond to conflict scenarios. Students were given brief scenarios that ended in an unresolved conflict (such as a conflict over access to a computer or a personal insult through name-calling) and asked to indicate what they would do if actually in the situation. Three different forms of this measure were used:

1. "Written Conflict Scenario" measure—students read the scenario and responded in essay form as to what they would do in that situation. The written conflict scenario measure was given to all participating students, usually the day before the training began, the day after training ended, and weeks later.

2. "Oral Conflict Scenario" measure—students participated in an individual interview during which they listened to the scenario and described what they would do in the situation.

3. "Role-Play Conflict Scenario" measure—students were randomly assigned to pairs, presented with the scenario, assigned a role, and asked to enact what they would do in the situation. They were videotaped doing so.

The strategy used to manage conflicts was measured by two scales. Responses were categorized in two ways—a category system derived from a series of content analyses of students' responses, and the categories specified by the Dual-Concerns Theory (Johnson & Johnson, 1978). In the content analysis, the strategies were placed on a 12-point continuum that was built by consensus among two professors and two graduate students in social psychology. Responses were classified according to the strategy used to deal with the conflict. The strategies were arranged in a hierarchy ranging from most destructive (physical aggression) to most constructive (full negotiations) and assigned points. The strategies were as follows (with number of points given in parentheses): physical aggression (1), verbal threats (2), unsatisfactory withdrawal (3), telling the teacher (4), commanding or requesting the other to give in (5), satisfactory withdrawal (6), invoking norms the other should conform to (7), proposing alternatives for the other to do (8), expressing intent to negotiate ("I would negotiate;" 9), negotiating for mutual agreement with some steps present ("I would negotiate an agreement we both would like;" 10), negotiating for mutual agreement with most steps present ("I would try to understand his or her point of view and negotiate an agreement we both would like; 11), and full integrative negotiation (all steps in the procedure present; 12).

The data were also classified according to the Dual-Concerns Theory (Johnson, 1972; Johnson & Johnson, 1978). This theory assumes participants in a conflict have two concerns: achieving their goal and maintaining a good relationship with

the other person. When those two dimensions are combined, the five strategies of withdrawing, forcing, smoothing, compromising, and negotiating, result. The strategies were placed on a 5-point continuum.

The third strategy measure was the "Real Conflicts With a Classmate" measure. Students (a) ranked several alternative ways of completing an assignment, (b) were paired with another student who ranked the alternatives differently, (c) resolved the conflict by deciding which alternative to adopt, and (d) wrote out the actions they took (step-by-step) to resolve the conflict. Each pair member described on a form what was done to reach the agreement. The responses were analyzed with the content analysis continuum described earlier and the Dual-Concerns Theory categories.

The fourth dependent variable was the long-term retention of the ability to use the integrative negotiation procedure in conflict situations. This was measured by Conflict Report forms and Conflict Scenarios administrated weeks or months after the conflict resolution training had ended.

The fifth dependent variable was the transfer of the use of the integrative negotiation procedure to nonclassroom and nonschool conflict situations. Three types of measures were used to determine the extent of transfer. The first was the spontaneous use of the negotiation and mediation procedures in settings other than the classroom. These were recorded in interviews with teachers and administrators at the schools in which the program was being implemented. The second measure was the Conflict Report form, which required students to provide written descriptions of conflicts in which students were involved. Over half of these conflicts occurred in the home. The third measure was the systematic observation of students managing their conflicts. The Conflict Resolution Observation form was used and field notes were taken. The form included six questions about the conflict and the characteristics of the participants (type of conflict, number and gender of students involved, name of mediator, duration of the conflict in minutes, whether the students used the negotiation procedure, whether the students sought mediation), five Likert-type 5-point scales to evaluate quality of the conflict resolution process (effort to resolve conflict, attentive listening to other person, emotional seriousness, commitment to negotiation procedure, respect for the other as a person), and whether each step of the negotiation process took place and the ease with which each was used. The observations took place 4 months following the training. Two trained observers identified 48 students who had received the training and systematically observed these students for 10 days in classrooms, hallways, playground, lunchroom, and gymnasium. Inter-rater reliability checks were made (total reliability was 0.81).

The sixth dependent measure was the "Resolutions of the Conflicts." This variable was measured by the actual agreements reached in conflicts by trained and untrained students and by the results of a conflict simulation. The "Actual Agreements Reached" measure resulted from a content analysis of the agreements

students reached to resolve their conflicts. The content analysis resulted in the following categories: no agreement, third-party imposed agreement, avoidance of each other, the other wins, the respondent wins, forgiving and apologizing, new solution agreeable to both disputants, and integrative agreement. The solutions were placed on an 8-point continuum from most destructive (no solution, authority imposed solution, winner take all) to most constructive (proposing new solution, reaching an integrative agreement). The nature of the resolutions were determined by the Conflict Report form (described earlier) and the Mediation Report form, on which peer mediators recorded the following information: date, names of the mediators, names of the students involved in the conflict, who referred the students for mediation, type of conflict, strategies used during the conflict, whether the conflict was resolved, and, if so, the agreed on solution.

The second measure of the resolution of the conflicts was the "Integrative Negotiating" measure, a negotiation simulation in which students had the option of seeking an integrative or a distributive agreement. It was given to all participating students before the study began and after the study ended. The measure was adapted from ones developed by Johnson (1967) and Pruitt (1981) and comprised two negotiating exercises. In the first, students were randomly assigned to pairs consisting of a buyer and a seller negotiating over the exchange of three commodities (e.g., pencils, pens, and markers). In the second, students were randomly assigned to pairs consisting of coworkers with equal status in a manufacturing company, negotiating over additional vacation hours for the completion of three company projects. In both exercises, students within each pair could negotiate in ways that would maximize their own outcomes (distributive negotiation) or maximize joint outcomes (integrative negotiation). The degree to which the agreement maximized joint benefit (determined by adding together the outcome of both negotiators) was used as a measure of integrative negotiations.

The seventh dependent variable was *attitudes toward conflict*. It was measured in two ways. The "Conflict Word Association" measure is a paper-and-pencil measure that asks students to write words that came to mind when thinking of conflict. Words were counted and categorized as (a) positive (feelings, actions, or outcomes associated with the constructive resolution of conflict), (b) negative (feelings, actions, or outcomes associated with the destructive resolution of conflict), or (c) neutral (neither positive nor negative nor a definition). The second measure of attitudes consisted of two forms included in student notebooks. Students were required to keep an academic notebook in which they completed assignment sheets. Two forms, the Teaching Reflection form and the Weekly Reflection form, were an unobtrusive measure of students' positive interest in the conflict resolution training.

The eighth dependent variable was *academic achievement and retention.* Academic achievement was measured by a paper-and-pencil test developed by the teachers and the researchers given to all participants at the end of the unit. Students were asked open-ended questions aimed at analysis and evaluation of the main

topics and events studied in the unit. A scoring guide listing key ideas correspond-
ing to each question was developed and one point was assigned to every key idea
that appeared in each answer. Academic retention was measured by a retention
achievement test (a shortened and adapted version of the achievement test) given 3
weeks to 12 months after the unit ended. It was scored in the same manner as the
achievement test. An academic transfer test was given in one of the studies. Two
questions on an examination in an unrelated class tested students' ability to ana-
lyze a conflict using the integrative negotiation framework. Students were asked to
describe the conflicts in an academic work (1 point was given for each conflict ac-
curately described) and select one of the conflicts they listed and explain how the
characters ideally could have solved it. Two scoring guides were applied to each
explanation. The points received depended on the specificity of the procedure for
resolving the conflict and the number of the steps of the integrative negotiation
procedure detailed.

The ninth dependent variable was the attitudes of the participating teachers and
the principal. It was measured by a "Conflict Resolution Interview Schedule."
They were asked about the impact of the training on the students, the classroom en-
vironment, classroom life, and parents.

The tenth dependent variable was the frequency and types of conflicts occur-
ring in the school. Although not directly involved in the hypotheses, data were also
collected on the types of conflicts that occur in schools through the Mediation Re-
port form. Two classification systems were used to determine the *types of conflicts*
occurring in the school. Deutsch (1973) theoretically defined five types of con-
flicts: control of resources (such as books, computers, athletic equipment, televi-
sion sets), preferences (what game to play, what activity to do first), values (what
"should be"), beliefs (what "is"), or the nature of the relationship between the indi-
viduals involved (who is dominant, what kind of friendship to have). In our re-
search studies, we have conducted a series of content analyses that result in
categorizing conflicts into seven types: aggression and fights, insults, put-downs,
and rumors, playground conflicts, turn-taking conflicts, possession and access
conflicts, preferences, values, and beliefs (what I prefer, what I believe is fact,
what I think "should be"), and conflicts over academic work.

All student responses were coded independently by two different coders who
were advanced doctoral students in social psychology. A 97% agreement level was
found using the ratio of agreements to coded occurrences.

Effect size.   Whenever possible, the findings of the peacemaker studies were
converted to effect sizes. The effect size *d* was the difference between treatment di-
vided by the pooled standard deviation of the two groups (Cohen, 1987). All effect
sizes were adjusted to control for small sample bias (Hedges & Olkin, 1985). The
mean weighted effect size was found by multiplying each independent effect size by

the inverse of its variance, and then the sum of these products was divided by the sum of the inverses.

RESEARCH RESULTS

To establish that social interdependence theory provides a theoretical foundation for integrative negotiation, it is necessary to determine whether in fact the processes and outcomes that would be expected from cooperation result from integrative negotiation. This can only be investigated if in fact there are conflicts among students that need to be resolved. It is first necessary, therefore, to establish the frequency with which conflicts occur in schools, determine what types of conflicts occur, and document how they are managed.

Types and Frequencies of Conflicts

The types and frequencies of conflicts were studied in urban, suburban, and rural schools. Daily conflicts were reported by most students participating in the studies. The majority of conflicts in the suburban and rural schools tended to be over the possession and access to resources, preferences about what to do, playground issues, and turn-taking (see Table 2). Only 38% of the conflicts involved physical and verbal aggression. By contrast, in the urban elementary school, 89% of the conflicts that were referred to mediation involved physical and verbal violence. The conflicts at

TABLE 2
Types And Frequencies Of Conflicts (Percentages)

	Urban	Rural, Suburban	Home
Content analysis			
Physical aggression	46	20	4
Insults/put-downs	43	18	4
Playground issues	0	19	1
Turn-taking	2	7	9
Possession/ access	5	21	37
Preferences	4	9	45
Academic Work	0	6	1
Theoretical			
Control of resources	5	37	43
Preferences/nuisances	3	31	45
Values	1	2	1
Beliefs	0	10	3
Relationships	91	20	8
Total (%)	100	100	100

home tended to be over preferences about what to do, and possessions and access to resources; only 8% of the conflicts reported involved physical fights and verbal insults. Very few conflicts occurred over academic work in either setting. Value and belief conflicts were almost never reported. Thus, conflicts frequently occur among students and occur over a wide variety of issues. The conflicts involved more physical and verbal aggression in urban than in suburban and rural schools.

Before training.   Before training, the daily conflicts described by students were rarely managed constructively. Five measures (the Conflict Report form, written responses to conflict scenarios, oral responses to conflict scenarios, videotaped role playing of resolving a conflict, and resolving actual conflicts) were used to determine the strategies students used in managing their conflicts before training. Untrained students indicated they would resolve the conflicts by either forcing the other person to submit (repeating their request, using threats, aggression, commands for the other to give in, and other competitive strategies to "win," such as going to the teacher for help) or withdrawing unsatisfied from the situation and the relationship. In the urban elementary school, physical force and verbal intimidation were the two most frequent strategies reported. Very few students indicated they would give up their goals to maintain a high-quality relationship with the other person. No untrained student used problem-solving negotiations as a means to resolve the conflicts. Feeney and Davidson (1996) and Davidson and Versluys (2000) similarly found that individuals who were untrained in conflict resolution were more likely to be either aggressive or submissive in communicating their interests and views. Thus, conflicts among students frequently occur, and before training the conflicts tend to be managed in ineffective and destructive ways.

Knowledge of Integrative Negotiation and Mediation Procedures

Knowledge (i.e., total recall of the steps in a conflict situation) of the integrative negotiation and mediation procedures was assessed by the "How I Manage Conflicts" measure. Individuals who received training in the integrative negotiations procedure displayed greater knowledge of (a) describing what they want, (b) describing how they feel, (c) describing their interests, (d) taking the other disputant's perspective to identify and understand the other's position and interests, (e) creating optional agreements that maximize joint outcomes, and (f) deciding on which agreement to adopt. Not only is it important that all these steps are remembered, they should be recalled in the correct sequence. Across our studies, following training, more than 90% of the students accurately recalled 100% of the integrative negotiation steps and the mediation procedure and recalled them in the correct sequence. Up to a year after the training had ended, on average, more than 75% of students

were still able to write out all the negotiation and mediation steps. The average effect size for the studies was 2.25 for the immediate posttest and 3.34 for the retention measures (see Table 3). The training tended to be quite effective in teaching students the integrative negotiation and mediation procedures.

Strategies Used to Manage Conflicts

Important issues are whether the integrative negotiation procedure will actually be engaged in when students face a conflict, and whether students will retain the use of the procedure over time. The results from the five measures of strategies students used in managing their conflicts (Conflict Report form, written responses to conflict scenarios, oral responses to conflict scenarios, videotaped role playing of resolving a conflict, and resolving actual conflicts) were consistent. The diversity of these measures adds validity and generalizability to the results. Responses were categorized in two ways. A content analysis was conducted that resulted in a 12-point continuum from destructive (physical and verbal aggression and avoidance) to constructive (invoking norms for appropriate behavior, proposing alternatives, and using the integrative negotiation procedure) actions. The data were also classified according to the Dual-Concerns Conflict Strategies Theory (withdrawing, forcing, smoothing, compromising, and integrative negotiations). Overall, from Table 3 it may be seen that for the Strategy Constructiveness Scale, the average effect size was 1.60 on the posttest and 1.10 for the retention tests. For the Dual-Concerns Scale, the posttest effect size was 1.10 and the retention effect size was 0.45. Trained students tended to

TABLE 3
Mean Weighted Effect Sizes For Peacemaker Studies

Dependent Variable	M	SD	Number Of Effects
Learned procedure	2.25	1.98	13
Learned procedure–retention	3.34	4.16	9
Applied procedure	2.16	1.31	4
Application–retention	0.46	0.16	3
Strategy constructiveness	1.60	1.70	21
Strategy constructiveness retention	1.10	0.53	10
Dual-concerns strategy	1.10	0.46	5
Dual-concerns–retention	0.45	0.20	2
Integrative agreement measure	0.98	0.36	5
Quality of solutions	0.73	0	1
Positive attitude	1.07	0.25	5
Negative attitude	–0.61	0.37	2
Subject matter learning	0.88	0.09	5
Subject matter retention	0.70	0.31	4

use relationship-oriented procedures in resolving conflicts more frequently than did untrained students. There were no significant differences between boys and girls in the strategies used to manage conflicts. Although the training took place in school and focused on school conflicts, there were no significant differences between the strategies used in conflicts in school and home settings.

Resolutions

The nature of the agreements reached will reflect the degree to which integrative negotiation is a cooperative endeavor. If individuals using the integrative negotiation procedure reach more agreements maximizing joint gain and benefits for the other party than do students not using the integrative negotiation procedure, then integrative negotiations result in the outcome expected in cooperative situations. To test this proposition, data were collected in a negotiation simulation ("Integrative Negotiating" measure) and by the "Actual Agreements Reached" measure. The simulation involved the buying and selling of commodities, and it was arranged so that students could seek a distributive or an integrative agreement. Students who had received the TSP training made integrative agreements significantly more frequently than did the untrained students (effect size = 0.98). Untrained students almost always sought a distributive agreement; no untrained student achieved a completely integrative agreement, whereas almost all trained students did so.

On the "Actual Agreements Reached" measure (Conflict Report form, Mediation Report form), students were asked to report the nature of the resolution of the conflict. The number of integrative agreements that resulted in both sides achieving their goals was much higher in conflicts among trained (rather than untrained) students. Only one study had the necessary analysis to determine an effect size (0.73). Untrained students left many conflicts unresolved. There was no significant difference between the nature of the agreements reached in school or at home.

The results of these two measures are consistent. Engaging in an integrative negotiation procedure results in agreements that are cooperative in nature (i.e., they maximize joint gain), thereby linking integrative negotiations and social interdependence theory.

Transfer of Training: Spontaneous Use of Integrative Negotiation and Mediation Procedures in Nonclassroom and Nonschool Settings

The sixth issue investigated was whether trained individuals would transfer the integrative negotiation procedure to nonclassroom and nonschool settings. Transfer of acquired procedures and skills is necessary to demonstrate the effectiveness of a program. Students did in fact use the procedures on the playground, in the lunchroom, in the hallways, on school buses, and in the home. Students spontaneously

wrote stories about using the negotiation and mediation procedures, students spontaneously presented skits in the school variety show involving the negotiation and mediation procedures, and parents reported that students used the negotiation and mediation procedures and skills with their brothers and sisters, their neighborhood friends, and even their pets. In a number of studies, students regularly filled out Conflict Report forms detailing the conflicts in which they were involved and how they were resolved. Over half of these conflicts occurred in the home.

Finally, students were directly observed on the playground and other nonclassroom settings in the school. The conflicts were classified as either low-investment or high-investment. Low-investment conflicts were usually light-hearted and lasted 30 to 60 seconds. An example of a low-investment conflict is a girl who wanted to give a picture to somebody and asked, "Who wants this?" More than one student wanted it and a conflict ensued. The conflict lasted about 1 minute and did not consume any of the students' emotional or academic energy. Formal negotiation and mediation procedures were not used, even by trained students. High-investment conflicts affected the students emotionally by detracting from their ability to work academically or to interact with classmates in a positive manner. Often these conflicts would last for days or longer. Examples include a group of sixth-grade girls who engaged in a prolonged conflict over who were "best friends" and who were no longer "best friends." Once trained, students involved in high-investment conflicts did enter into integrative negotiations and seek out mediation. Trained students exerted considerable effort to resolve the conflict, listening attentively to each other, being emotionally serious about the conflict and its resolution, being committed to the negotiation and mediation procedures, and expressing personal respect for the other individuals involved. These observation results are important because several studies have found that individuals use less constructive strategies to resolve conflicts in real life than when they deal with hypothetical conflicts presented in interviews or conflicts in simulated role plays (Collins & Laursen, 1992; Sternberg & Dobson, 1986; Youniss & Smollar, 1985); and several other studies have found that training in problem solving tends not to transfer to similar situations (Brooks & Dansereau, 1987; Derry, 1989; Lehrer, 1989; Pea, Kurland, & Hawkins, 1985; Tziner & Haccoun, 1991).

Attitudes Toward Conflict

Conflict within a cooperative context often is valued because it tends to result in positive outcomes when it is managed constructively. The seventh issue investigated was whether trained individuals would have more positive and less negative attitudes toward conflict than would untrained individuals. Attitudes toward conflict were measured by "The Conflict Word Association" measure and the Teaching Reflection forms and the Weekly Reflection forms. Before training, students held negative attitudes toward conflict seeing almost no potential positive

outcomes. After training, although still perceiving conflict more negatively than positively, students' attitudes became markedly more positive and less negative, whereas untrained students' attitudes stayed essentially the same (highly negative). The average effect size for positive attitudes toward conflict was 1.07 and for negative attitudes was –0.61.

Academic Subject Matter Learning

The final issue investigated was whether academic achievement would increase when the integrative negotiation procedure was integrated into academic units. To determine the impact, the TSP program has been integrated into both English literature and history academic units. The basic design for these studies was to assign students randomly to classes in which the peacemaker training was integrated into the academic unit studied or to classes in which the academic unit was studied without any conflict training. Students in the experimental classes both studied the academic material and learned the negotiation and mediation procedures. Students in the control classes spent all their time studying the academic material. Achievement and retention were measured by paper-and-pencil tests developed by the researchers and the teachers. Students who received the peacemaker training as part of the academic unit tended to score significantly higher on achievement (effect size = 0.88) and retention (effect size = 0.70) tests than did students who studied the academic unit only (see Table 3). Students not only learned the factual information contained in the academic unit better, they were better able to interpret the information in insightful ways. The higher achievement is all the more notable as students in the control classes spent all their time studying the academic material, whereas students in the experimental classes had to learn both the novel and the negotiation and mediation procedures in the same amount of time. It seems that enacting the conflicts in a piece of literature or a history unit while using the integrative negotiation and mediation procedures results in a greater understanding of the characters and events being studied.

Distributive Bias

The high percentage of untrained students who choose a distributive approach to negotiations indicates that in the United States and Canada there is a bias toward distributive negotiations. The results of these studies were similar to those of Johnson (1967, 1971), who found that college students and adults frequently failed to see the possibility of an integrative agreement and assumed that all issues were distributive, even when some were not. The results of the studies reported in this article, however, indicate that when the students were given training in integrative negotiations, their behavior switched to seeking integrative agreements over distributive ones. In other words, the distributive bias can be eliminated with training.

DISCUSSION

Although there has been considerable discussion of the desirability of integrative negotiations, there has been relatively little conceptualization of its nature and little research on its actual use in "real-world" settings. It has been defined in various ways (integrative issues, goals, agreements, skills), but these definitions have not been derived from a broader theoretical framework and have not generated an operational procedure for practitioners to use. Discussions of integrative negotiations are commonly disconnected from theory.

Social interdependence theory provides the needed framework for integrative negotiations. Integrative negotiations may be viewed as a cooperative process to the extent that it results in the same process and outcomes as cooperation. Our meta-analysis of 16 studies on integrative negotiations provides the data to determine whether this indeed is the case. The results indicate that the processes and outcomes that would be expected from cooperation are in fact found when an integrative negotiation procedure is used. More specifically, it was found that trained students recalled the steps of integrative negotiations, retained their understanding over considerable time, actually used the integrative negotiation procedure to resolve conflicts, retained their ability to use the procedure over time, reached more integrative agreements, transferred their use of the integrative negotiation procedure to nonclassroom and nonschool settings, developed more positive attitudes toward conflict, and increased academic learning when the training was integrated into academic units.

From these findings we conclude that integrative negotiations are a cooperative procedure that may be seen as a specific type of promotive interaction. The basic assumption of social interdependence theory is that positive interdependence results in promotive interaction which in turn results in desired outcomes. Linking integrative negotiations to social interdependence theory indicates that integrative negotiation is a form of promotive interaction that results in the outcomes of cooperation (see Figure 1).

There are a number of other studies linking cooperation and integrative negotiations. The clear and unambiguous expression of cooperative intentions in negotiations results in higher quality agreements being reached in a shorter amount of time (i.e., better agreements faster; Johnson, 1971, 1974; Johnson et al., 1976).
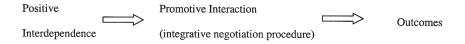

FIGURE 1   Integrative negotiations as promotive interaction.

The other disputant becomes less defensive, more willing to change his or her position, less concerned about who is right and who is wrong, more understanding of one's views and ideas, and tends to see one as an understanding and trustworthy person in whom he or she can honestly confide. Stevahn, Johnson, Johnson, and Real (1996) found that implementing the TSP program in a cooperative (as opposed to individualistic) context resulted in much greater use of integrative negotiation and the adoption of more positive attitudes toward conflict. Davidson and Versluys (1999) found that training in cooperation created stronger effects on the outcomes of negotiation than did training in problem solving, and cooperation may be more fundamental to the success of integrative negotiations. Finally, in a meta-analysis of 28 studies on negotiation, De Dreu, Weingart, and Kwon (2000) found that the more cooperative, prosocial individuals engaged in more problem-solving behavior, less contentious behavior, and achieved higher joint outcomes than did individuals with egoistic motives, especially when the negotiators search for agreements that do not require either to yield and give up their goals. These studies support the premise that integrative negotiations are one aspect of promotive interaction and may be subsumed under social interdependence theory.

Given the more constructive conflict resolution by individuals trained in integrative negotiations, the question arises as to what happens when a trained individual has a conflict with an untrained individual. Johnson, Johnson, and Dudley (1992) conducted a study in which, 5 months after the end of training, pairs of students who had been trained in integrative negotiations, pairs who were not trained, and mixed pairs of students (one trained, one untrained) negotiated a conflict. Exactly 80% of the trained pairs reached an integrative agreement, 46% of the untrained pairs reached an agreement, and 75% of the mixed pairs reached an agreement. It seems that having one trained person involved in a conflict significantly increases the constructiveness with which the conflict is managed. Integrative negotiation actions can be elicited in an untrained individual when resolving a conflict with a trained individual. Similar results were found by Feeney and Davidson (1996) and Davidson and Versluys (2000) with college students and high school students.

The finding that students developed more positive and less negative attitudes toward conflict has many important ramifications. It indicates that students not only gained conceptual understanding of the integrative negotiation procedure and the skills needed to implement it, but they also developed the desire to use it. Sternberg and Dobson (1987) and Youniss and Smollar (1985) found that when asked on questionnaire items how they would resolve conflicts, adolescents responded with an awareness of cooperative negotiation strategies, but when asked about real life conflicts, they were just as likely to use strategies of temporary withdrawal, power assertion, and disengagement. Other studies indicate that adolescents are selective in regard to the relationships in which they will use cooperative negotiation strategies, using them for peer-related problems more often than conflicts involving adults (Selman, Beardslee, Schultz, Krupa, & Podorefsky, 1986). Having

more positive attitudes toward conflict increases individuals' willingness and desire to engage in integrative negotiations to resolve the conflicts in a constructive way.

Social interdependence theory would posit that expected future interaction determines whether a distributive or an integrative negotiation procedure should be used. It is clear from the research by Deutsch (1973), Axelrod (1981), and others that competition is most effective when there will be no future interactions between the individuals, and that cooperation is most effective in ongoing relationships in which future interactions will take place. It is the shadow of the future that highlights the positive interdependence among individuals and motivates promotive interaction. Within conflicts, when no future interaction will take place, distributive negotiations are effective, but where future interactions are expected, integrative negotiations should be used.

Practical Significance

The previous theorizing and research on integrative negotiations has tended not to result in specific and valid practical procedures for engaging in integrative negotiations that practitioners could use. Schools may be an especially important setting in which to test the applicability of integrative negotiations, as a sizable proportion of students in many countries report feeling unsafe, fearful, or that their school has a violence problem (Benbenishty, Zeira, & Astor, 2000; Kaufman et al., 1999). Thus, demonstrating that the use of integrative negotiations results in more constructive management of conflicts in schools provides an important field test of the procedure. The 16 studies on the TSP program validated the effectiveness of the six-step integrative negotiation procedure and provided evidence that it is possible to intervene in schools and change substantially the way in which students manage their conflicts with each other, thus providing practitioners some guidance as to what to do in "real-world" settings, especially in schools. These studies are the most extensive assessment currently available of a holistic intervention to teach students how to manage conflicts constructively. More such holistic assessments of intervention programs are needed.

LIMITATIONS OF PREVIOUS RESEARCH

Range of Dependent Variables

The research on integrative negotiations has focused primarily on the nature of the agreements reached. The 16 studies on the TSP program considerably expanded the dependent variables examined, including the learning of information about the issue being negotiated, the attitudes toward conflict generated by the

negotiating experience, the mastery of the integrative negotiation procedure, the propensity to engage in integrative negotiations in the future, attitudes toward conflict, and the constructive resolution of future conflicts. The evidence that integrative negotiations affect a wide variety of important variables strengthens the data on its effectiveness.

Limitations in Generalizability

The generalizability of the results of the previous research on integrative negotiations is limited in several important ways. It has focused largely on participants homogeneous in age (primarily college students), ethnicity (primarily White individuals), socioeconomic class (primarily middle class), setting in which the research was conducted (primarily psychological laboratories), and duration of the studies (usually 1 hour or so). The 16 studies we have reviewed add considerable generalizability to what is known about integrative negotiations by conducting long-term research (up to 8 months) in field settings (i.e., schools) with participants who range from kindergarten to high school age; are in urban, suburban, and rural schools; are minority as well as majority ethnicity; are from lower as well as middle-class backgrounds; and are from two countries (i.e., the United States and Canada). In addition, generalizability is increased by the careful development and validation of the dependent variables, the grounding of the TSP program in conflict resolution theory, and the careful controlled way in which the studies were carried out. These studies confirm the effectiveness and desirability of integrative negotiations, corroborate the laboratory research, and demonstrate the applicability of the integrative negotiation research to actual "real-world" settings.

CONCLUSIONS

In the literature on negotiations, integrative negotiations is relatively neglected. Although the need to have validated procedures for practitioners to engage in integrative negotiations is quite high, the possibility of developing such procedures and validating them is hampered by the lack of (a) conceptual clarity as to the nature of integrative negotiations, (b) a theoretical framework, (c) a procedure for engaging in integrative negotiations, and (d) limitations of the existing research. Given that integrative negotiations may be seen as a cooperative process and distributive negotiations may be seen as a competitive process, it seems reasonable to place them within social interdependence theory. The evidence that in fact integrative negotiations produce the outcomes that would be expected from cooperation corroborates the view that integrative negotiations are a form of promotive interaction. Social interdependence theory thus provides the framework for clarifying the nature of inte-

grative negotiations and operationalizing a procedure for their use. The results of a recent meta-analysis of a series of studies on training students from kindergarten through ninth grade in an integrative negotiation procedure validate the link between social interdependence theory and integrative negotiations, expand the number of dependent variables that are included in the research on integrative negotiations, and increase the generalizability of the research on integrative negotiations. Subsuming integrative negotiations under social interdependence theory (a) enables researchers to more precisely define and refine the concept of integrative negotiations, summarize the existing research on integrative negotiations, generate more and guide the research on integrative negotiations, and clarify the significance of research findings, and (b) provides practitioners guidance as to how to more precisely create, refine, and implement operational integrative negotiation procedures.

REFERENCES

Axelrod, R. (1981). *The evolution of cooperation*. New York: Basic Books.

Bazerman, M., Curhan, J., Moore, D., & Valley, K. (2000). Negotiation. In J. Spence, J. Darley, & D. Foss (Eds.), *Annual review of psychology* (Vol. 51, pp. 279–314). Palo Alto, CA: Annual Reviews.

Benbenishty, R., Zeira, A., & Astor, R. (2000, January). *Principals and teachers reports of school violence in Israel—Wave II: Fall 1999*. Jerusalem, Israel: Israeli Ministry of Education.

Blake, R., & Mouton, J. (1962). The intergroup dynamics of win–lose conflict and problem-solving collaboration in union-management relations. In M. Sherif (Ed.), *Intergroup relations and leadership* (pp. 94–140). New York: Wiley.

Blake, R., & Mouton, J. (1964). *The managerial grid*. Houston, TX: Gulf.

Brooks, L., & Dansereau, D. (1987). Transfer of information: An instructional perspective. In S. Cormer & J. Hagman (Eds.), *Transfer of learning: Contemporary research and applications* (pp. 121–150). London: Academic.

Buyer, L. (1988). Creative problem solving: A comparison of performance under different instructions. *Journal of Creative Behavior, 22,* 55–61.

Cobb, S. (1991). Einsteinian practice and Newtonian discourse: An ethical crisis in mediation. *Negotiation Journal, 7,* 87–102.

Cohen, J. (1987). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Collins, W., & Laursen, B. (1992). Conflict and relationships during adolescence. In C. Shantz & W. Hartup (Eds.), *Conflict in child and adolescent development* (pp. 216–240). Cambridge, England: Cambridge University Press.

Davidson, J., & Versluys, M. (1999). Effects of brief training in cooperation and problem solving on success in conflict resolution. *Peace and Conflict: Journal of Peace Psychology, 5,* 137–148.

Davidson, J., & Versluys, M. (2000). Conflict resolution training within a school setting. *Australian Educational and Developmental Psychologist, 17,* 117–134.

De Dreu, C., Weingart, L., & Kwon, S. (2000). Influence of social motives on integrative negotiation: A meta-analytic review and test of two theories. *Journal of Personality and Social Psychology, 78,* 889–905.

DeCecco, J., & Richards, A. (1974). *Growing pains: Uses of school conflict.* New York: Aberdeen Press.

Derry, S. (1989). Strategy and expertise in solving word problems. In C. McCormick, G. Miller, & M. Pressley (Eds.), *Cognitive strategy research* (pp. 269–303). New York: Springer-Verlag.

Deutsch, M. (1949). A theory of cooperation and competition. *Human Relations, 2,* 129–152.

Deutsch, M. (1962). Cooperation and trust: Some theoretical notes. In M. Jones (Ed.), *Nebraska symposium on motivation* (pp. 275–319). Lincoln: University of Nebraska Press.

Deutsch, M. (1973). *The resolution of conflict.* New Haven, CT: Yale University Press.

Deutsch, M., Canavan, D., & Rubin, J. (1971). The effects of size of conflict and sex of experimenter upon interpersonal bargaining. *Journal of Experimental Social Psychology, 7,* 258–267.

Deutsch, M., & Krauss, R. (1960). The effect of threat upon interpersonal bargaining. *Journal of Abnormal and Social Psychology, 61,* 181–189.

Deutsch, M., & Krauss, R. (1962). Studies of interpersonal bargaining. *Journal of Conflict Resolution, 6,* 52–76.

Deutsch, M., & Lewicki, R. (1970). "Locking in" effects during a game of chicken. *Journal of Conflict Resolution, 14,* 367–378.

Feeney, M., & Davidson, J. (1996). Bridging the gap between the practical and the theoretical: An evaluation of a conflict resolution model. *Peace and Conflict: Journal of Peace Psychology, 2,* 255–269.

Fisher, R., & Ury, W. (1981). *Getting to yes*. New York: Penguin.

Follett, M. (1940). Constructive conflict. In H. Metcalf & L. Urwick (Eds.), *Dynamic administration: The collected papers of Mary Parker Follett* (pp. 30–49). New York: Harper.

Hedges, L., & Olkin, I. (1985). *Statistical methods for meta-analysis*. New York: Academic.

Johnson, D. W. (1967). Use of role reversal in intergroup competition. *Journal of Personality and Social Psychology, 7,* 135–141.

Johnson, D. W. (1970). *Social psychology of education*. New York: Holt, Rinehart & Winston.

Johnson, D. W. (1971). Role reversal: A summary and review of the research. *International Journal of Group Tensions, 1,* 318–334.

Johnson, D. W. (1972). *Reaching out: Interpersonal effectiveness and self-actualization* (8th ed.). Boston: Allyn & Bacon.

Johnson, D. W. (1974). Communication and the inducement of cooperative behavior in conflicts: A critical review. *Speech Monographs, 41,* 64–78.

Johnson, D. W. (1991). *Human relations and your career* (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Johnson, D. W., & Johnson, F. (1978). *Joining together: Group theory and group skills* (8th ed.). Upper Saddle River, NJ: Prentice-Hall.

Johnson, D. W., & Johnson, R. (1974). Instructional goal structure: Cooperative, competitive, or individualistic. *Review of Educational Research, 44,* 213–240.

Johnson D. W., & Johnson, R. (1999). *Learning together and alone: Cooperative, competitive, and individualistic learning* (5th ed.). Boston: Allyn & Bacon.

Johnson, D. W., & Johnson, R. (1979). Conflict in the classroom: Controversy and learning. *Review of Educational Research, 49,* 51–61.

Johnson, D. W., & Johnson, R. (1984). *Creative conflict*. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1989). *Cooperation and competition: Theory and research*. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1995). *Teaching students to be peacemakers*. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (2002). Teaching students to be peacemakers: A meta-analysis. *Journal of Research in Education.*

Johnson, D. W., Johnson, R., & Dudley, B. (1992). Effects of peer mediation training on elementary school students. *Mediation Quarterly, 10,* 89–99.

Johnson, D. W., Johnson, R., & Holubec, E. (1998). *Cooperation in the classroom* (6th ed.). Edina, MN: Interaction Book Company.

Johnson, D. W., McCarty, K., & Allen, T. (1976). Congruent and contradictory verbal and nonverbal communications of cooperativeness and competitiveness in negotiations. *Communication Research, 3,* 275–292.

Katz, N., & Thorson, S. (1988). Theory and practice: A pernicious separation? *Negotiation Journal, 4,* 115–129.

Kaufman, P., Chen, X., Choy, S., Chandler, K., Chapman, C., Rand, M., et al. (1999). *Indicators of school crime and safety* (1999 NCES Publication No. 999–251/NCJ–172215). Washington, DC: U.S. Departments of Education and Justice.

Lehrer, R. (1989). Computer-assisted strategic instruction. In C. McCormick, G. Miller, & M. Pressley (Eds.), *Cognitive strategy research* (pp. 303–321). New York: Springer-Verlag.

Lewicki. R., Weiss, S., & Lewin, D. (1992). Models of conflict, negotiation and third party intervention: A review and synthesis. *Journal of Organizational Behavior, 13,* 209–252.

Littlefield, L., Love, A., Peck, C., & Wertheim, E. (1993). A model for resolving conflict: Some theoretical, empirical, and practical implications. *Australian Psychologist, 28,* 80–85.

Maher, C. (1986). Evaluation of a program for improving conflict management skills of special services directors. *Journal of School Psychology, 24,* 45–53.

Martin, G. (1988). The practical and theoretical split in modern negotiation literature. *Negotiation Journal, 4,* 45–54.

Mulvey, E., & Reppucci, N. (1981). Police crisis intervention training: An empirical investigation. *American Journal of Community Psychology, 9,* 527–546.

Pea, R., Kurland, D., & Hawkins, J. (1985). Logo and the development of thinking skills. In M Chen & W. Paisley (Eds.), *Children and microcomputers: Research on the newest medium* (pp. 192–212). Beverly Hills, CA: Sage.

Pruitt, D. (1981). *Negotiation behavior.* New York: Academic.

Pruitt, D. (1986). Trends in the scientific study of negotiation and mediation. *Negotiation Journal, 2,* 237–246.

Rubin, J., Pruitt, D., & Kim, S. (1994). *Social conflict.* New York: McGraw-Hill.

Ryan, M. (1990). *Conflict management training: Effectiveness of the resolution of dyadic conflict.* Unpublished masters thesis, La Trobe University, Cundora, Victoria, Australia.

Selman, R., Beardslee, W., Schultz, L., Krupa, M., & Podorefsky, D. (1986). Assessing adolescent interpersonal negotiation strategies: Toward the integration of structural and functional models. *Developmental Psychology, 22,* 450–459.

Simon, H. (1976). *Administrative behavior: A study of decision-making processes in administrative organization* (3rd ed.). New York: Free Press.

Sternberg, R., & Dobson, D. (1987). Resolving interpersonal conflicts: An analysis of stylistic consistency. *Journal of Personality and Social Psychology, 52,* 794–812.

Stevahn, L., Johnson, D. W., Johnson, R. T., & Real, D. (1996). The impact of a cooperative or individualistic context on the effectiveness of conflict resolution training. *American Educational Research Journal, 33,* 801–823.

Thomas, K. (1976). Conflict and conflict management. In M. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 889–935). Chicago: Rand McNally.

Tziner, A., & Haccoun, R. (1991). Personal and situational characteristics influencing the effectiveness of transfer of training improvement strategies. *Journal of Occupational Psychology, 64,* 167–177.

Walton, R., & McKersie, R. (1965). *A behavioral theory of labor negotiations.* New York: McGraw-Hill.

Wertheim, E., Love. A., Littlefield, L., & Peck. C. (1992). *I win, you win: How to have fewer conflicts, better solutions, and more satisfying relationships.* Melbourne, Australia: Penguin.

Wood, C., & Davidson, J. (1993). Conflict resolution in the family: A PET evaluation study. *Australian Psychologist, 28,* 100–104.

Youniss, J., & Smollar, J. (1985). *Adolescent relations with mothers, fathers, and friends*. Chicago: University of Chicago Press.

PEACEMAKER STUDIES REFERENCES

Dudley, B. S., Johnson, D. W., & Johnson, R. (1996). Conflict-resolution training and middle-school students' integrative negotiation behavior. *Journal of Applied Social Psychology, 26,* 2038–2052.

Johnson, D. W., & Johnson, R. (2001). Peer mediation in an inner city elementary school. *Urban Education, 36,* 165–178.

Johnson, D. W., Johnson, R., Cotten, B., Harris, D., & Louison, S. (1995). Using conflict managers to mediate conflicts in an elementary school. *Mediation Quarterly, 12,* 379–390.

Johnson, D. W., Johnson, R., & Dudley, B. (1992). Effects of peer mediation training on elementary school students. *Mediation Quarterly, 10,* 89–99.

Johnson, D. W., Johnson, R., Dudley, B., & Acikgoz, K. (1994). Peer mediation: Effects of conflict resolution training on elementary school students. *Journal of Social Psychology, 134,* 803–817.

Johnson, D. W., Johnson, R., Dudley, B., & Magnuson, D. (1995). Training of elementary school students to manage conflict. *Journal of Social Psychology, 135,* 673–686.

Johnson, D. W., Johnson, R., Dudley, B., Mitchell, J., & Fredrickson, J. (1997). The impact of conflict resolution training on middle school students. *Journal of Social Psychology, 137,* 11–22.

Johnson, D. W., Johnson, R., Dudley, B., Ward, M., & Magnuson, D. (1995). Impact of peer mediation training on the management of school and home conflicts. *American Educational Research Journal, 32,* 829–844.

Johnson, D. W., Johnson, R., Mitchell, J., Cotton, B., Harris, D., & Louison, S. (1996). The effectiveness of conflict managers in an inner-city elementary school. *Journal of Educational Research, 89,* 280–285.

Stevahn, L., Johnson, D. W., Johnson, R. T., Green, K., & Laginski, A. M. (1997). Effects on high school students of conflict resolution training integrated into English literature. *Journal of Social Psychology, 137,* 302–315.

Stevahn, L., Johnson, D. W., Johnson, R. T., Laginski, A. M., & O'Coin, I. (1996). Effects on high school students of integrating conflict resolution and peer mediation training into an academic unit. *Mediation Quarterly, 14,* 21–36.

Stevahn, L., Johnson, D. W., Johnson, R., Oberle, K., & Wahl, L. (2000). Effects of conflict resolution training integrated into a kindergarten curriculum. *Child Development, 71,* 772–784.

Stevahn, L., Johnson, D. W., Johnson, R. T., & Real, D. (1996). The impact of a cooperative or individualistic context on the effectiveness of conflict resolution training. *American Educational Research Journal, 33,* 801–823.

Stevahn, L., Johnson, D. W., Johnson, R., & Schultz, R. (2002). Effects of conflict resolution training integrated into a high school social studies curriculum. *Journal of Social Psychology, 142,* 305–331.

Stevahn, L., Munger, L., & Kealey, K. (2002). *First-year effects of teaching all students conflict resolution in a French Immersion elementary school.* Manuscript submitted for publication.

Stevahn, L., Oberle, K., Johnson, D. W., & Johnson, R. (2001, April). *Effects of role reversal training and use of integrative negotiation for classroom management on conflict resolution in kindergarten.* Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.