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Models of conflict, negotiation and third party intervention: A review and synthesis

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Summary

From the vast research literature on organizational conflict and conflict resolution, this review identifies 44 major models in the area of conflict, negotiation, and third party processes (e.g. mediation and arbitration). Each of the models is described, categorized as descriptive or normative, and evaluated with respect to empirical support. Discussion of these models surfaces a number of significant, but often implicit assumptions about conflict and its management; insufficient bridging between descriptive and normative endeavors; and an extreme emphasis on model creation over model testing.

Introduction

The management of conflict within organizations has drawn the selective attention of researchers and practitioners for years, but recent discussions have gained a certain momentum and coherence. Terms such as 'alternative (non-litigious) dispute resolution', 'integrative bargaining' and 'final offer arbitration' have become part of a common, working vocabulary. Research and teaching in the area have increased considerably. Business and civic leaders are calling for the more effective use of alternative dispute resolution processes, and the greater visibility of these processes and effective techniques will stimulate further research and theory development. At this point, then, it is appropriate to review and to evaluate the core components of research in this field.

The tremendous number of extant empirical studies in conflict management precludes a comprehensive literature review; rather, the purpose of this article is to highlight several of the major streams of research and model-building related to conflict in organizations and to consider them carefully. The review begins by identifying several discipline-based approaches to the study of conflict in organizations, three of which will be more fully examined here: 'micro'

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level analysis of conflict, negotiation, and third party dispute resolution. For each approach, this review highlights the predominant model (paradigm), presents other related and distinctive models and relevant research, and evaluates them — in part, by uncovering strong but usually unarticulated underlying assumptions. The review concludes with an overview of theoretical strengths and weaknesses of existing models and paradigms, and proposes a future research agenda.

Approaches to studying conflict in organizations

Within the eclectic history of conflict research, one can find at least six major approaches, each subsuming a number of theories and models. Three of them stem from academic disciplines. The *micro-level (psychological) approach* has concentrated on conflict within and among human beings as individuals, specifically on intrapersonal, interpersonal and small group behavior variables that affect conflict causes, dynamics and outcomes (e.g. Nye, 1973). The *macro-level (sociological) approach* has focused on groups, departments, divisions and even entire organizations (March and Simon, 1958; Pondy, 1967) as units of analysis for understanding conflict dynamics. Researchers have discussed the functions and dysfunctions of social conflict (Coser, 1956) as well as the analysis of conflict at the societal level (Dahrendorf, 1959; Marx, 1906). The third approach has employed *economic analysis*, applying models of economic rationality to individual decision-making and even to complex social behavior. For example, a subject of economics known as game theory abstracts from situations of interdependence, the parties' alternative courses of action, possible outcomes and parties' preferences, and prescribes rational choice behavior (Luce and Raiffa, 1957; Shubik, 1964).

In addition to the three conflict research approaches closely tied to disciplines, there are three more that owe their origins to specific problem area applications. The *labor relations* approach originated from an interest in understanding and influencing the practice of American industrial relations. (It has also drawn heavily from the economics and psychological disciplines, however). As Kochan and Verma (1983) have noted, industrial relations research 'has maintained a coherent and consistent set of assumptions about the nature and role of conflict within organizations around issues pertaining to the determination and administration of the employment relationship' (p. 17). (See also Barbash, 1964; Commons, 1928, 1934; Kerr, Dunlop, Harbison and Myers, 1964). Recent research has focused more heavily on the determinants and consequences of workplace conflict resolution mechanisms and techniques (Kochan, Katz and McKersie, 1986; Lewin, 1986, 1987; Lewin and Peterson, 1988).

A fifth approach, *bargaining and negotiation*, arose from the frequent use of these processes in labor relations and international relations. Early researchers in these areas enumerated sets of principles for effective negotiation (e.g. Chamberlain (1955) and Dunlop and Healey (1953) in labor relations; or Ikle (1964) and Schelling (1960) in international relations), while others borrowed from game theory to model the bargaining process (Nash, 1950; Zeuthen, 1930). Social psychologists have created an entire subdiscipline of research on the interpersonal aspects of these processes (e.g. Druckman, 1977a). More contemporary researchers have blended or cross-pollinated the discipline-based models or focused on specific applications such as labor relations (Siegel and Fouraker, 1960; Stevens, 1963; Walton and McKersie, 1965).

Third party dispute resolution represents the sixth and last approach. Like the previous approaches, this research was stimulated by concerns about more effective resolution of labor and international disputes (Jackson, 1952), and emphasizes the actions taken by parties external to a conflict to resolve it or to restore effective negotiation. Early studies focused on third

party style and effectiveness in arbitration (Kagel, 1961), mediation (Stevens, 1963) and process consultation (Walton, 1969), while more contemporary approaches have integrated third party intervention in a broad understanding of the causes and dynamics of conflict itself (Sheppard, 1984).

Other academic disciplines that have contributed to conflict research, such as social psychology and organizational behavior, have borrowed from two or more of the aforementioned approaches. Indeed, considerable cross-fertilization has taken place among the six approaches themselves. Although that effort has been beneficial in many ways, it has also resulted in a serious neglect of some of the premises and fundamental assumptions of the original approaches and paradigms.

To make a review of this vast field viable, we limit subsequent discussion to three of the approaches or domains — micro-level conflict, negotiation, and third party dispute resolution. Within each domain, we concentrate on research that is typically construed as psychological and social-psychological. Of the six approaches above, the three selected have shown significant and consistent paradigm development. Further, these approaches fit well together. They provide an intuitively appealing flow from one to the other and an appropriate basis for comparison and possible synthesis of research.

The assessment of each domain begins with a description of the dominant model or paradigm therein. Then other major models are identified and categorized according to what we believe is a key distinction among models: their predominant thrust as either descriptive or normative. The former take a scientifically 'detached' position, and attempt simply to describe and to predict actual conflict dynamics, while the latter prescribe actions for individuals and historically have reflected an evaluation of conflict as fundamentally bad and destructive (e.g. Blake and Mouton, 1964). This review assigns each model to either the descriptive or normative category¹. Then we assess the models by referring to pertinent empirical research, discern unarticulated and untested assumptions, and suggest areas for future research and model development.

Models of conflict

Early conflict researchers — particularly social psychologists — were preoccupied with efforts to define conflict and to describe its primary causes (see Fink (1968) for one review). For instance, Mack and Snyder (1957) described conflict as 'a particular kind of social interaction process between parties who have mutually exclusive or incompatible values' (p. 212). Bernard (1957) and Deutsch (1973) offered similar views, but other definitions of conflict abound. Theorists have debated the relative importance of such definitional contrasts as the state or outcome of conflict versus the process (Schmidt and Kochan, 1972; Pondy, 1967); the goals of the parties versus their actions (Boulding, 1962; Deutsch, 1973); whether the motives of the conflict creator (e.g. deliberate interference in the other's goal pursuit) should be included (Wall, 1985; *cf.* Emerson, 1962); and objective versus perceived incompatibility of goals or actions (Boulding, 1962; *cf.* Hocker and Wilmot, 1985, p. 23). The amount of attention given to these elements (compared to others that are conceivably more or less important) tends to depend on the researchers' preferred approaches and methods for conceptualizing and investigating conflict; currently, no one definition appears predominant (*cf.* Brett, 1984).

¹ The designation of models to descriptive and normative categories was not as simple as it initially appeared. Some models straddle both categories; other models were developed with one intent but have since been employed for another purpose. For the most part, the basis for our category assignments was the emphasis and tone of the original work.

The dominant paradigm: Pondy's organizational conflict model

In a now-classic article in the literature on organization, Pondy (1967) attempted to synthesize the relationships among structural and personality variables that affect conflict (e.g. Deutsch, 1973; Swingle, 1970), conflict processes and conflict outcomes by treating them as elements of a conflict 'episode'. Its five stages are: (a) antecedent conditions; (b) latent conflict; (c) perceived conflict; leading to (d) manifest conflict; and then to (e) some conflict aftermath. Pondy proposed that the primary antecedent conditions in organizations included competition over scarce resources, individual and/or subunit efforts to achieve autonomy and escape interdependence, and divergence of individual and/or subunit goals.

Each of these antecedent conditions served as the core of a model of organizational conflict. First, problems of *competition for scarce resources* would arise between different interest groups (e.g. labor versus management, staff versus line) who engaged in a strategic bargaining process to resolve their differences. Second, a bureaucratic model largely described the *conflict for control* that occurs between vertically differentiated groups, such as superiors and subordinates, and typically involves disputes related to rules and rule-making, organizational procedure, and leadership. Finally, a systems model describes the *conflict in lateral relationships* that occurs as workers in different subunits attempt to resolve conflicts related to work coordination and task integration.

Discussion

Pondy's stage model has not been directly tested — a point to which we will return — but many researchers refer to it and few have attempted to refine and to build on it (Filley, 1975; Thomas, 1976). Further, Pondy's three conflict types tend to encompass or subsume much of the subsequent research literature on the types and causes of conflict. The premise of resource conflict underlies intergroup conflict and labor relations models (e.g. Smith, 1976; Homans, 1961), while control conflicts relate to models of power use and power equalization (Derr, 1978). Lateral relations conflicts are often at the root of contemporary studies of behavior in complex and dynamic organizations adapting to their environments (Strauss, 1962).

Table 1. Models of conflict

The dominant paradigm — Organizational conflict (Pondy, 1967)	
Descriptive	Normative
Fight Rapoport, 1960	Conflict grid Blake and Moulton, 1964, 1978
Debate Rapoport, 1960	Conflict cycles Walton, 1969
Stages of conflict Filley, 1975; Thibaut and Walker, 1975; Sheppard, 1984	Systems 1–4 Likert and Likert, 1976
Dual concerns Ruble and Thomas, 1976; Pruitt and Rubin, 1986	Interface conflict-solving Blake and Moulton, 1964, 1978
Structural model Thomas, 1976	

Descriptive models of conflict

Several other descriptive models — some as comprehensive as Pondy's, some far more limited — have also been developed since his was published. None is as frequently cited in the organizational literature, but each is in some way distinctive and has added to the understanding of conflict.

'Fight'

In Rapoport's (1960) view, this model describes conflict that stems from interpersonal aggression. Fights are largely emotional and nonrational, driven by fear and stereotypes and characterized by hostile, tit-for-tat responses that develop into 'conflict spirals' (Deutsch, 1973; *cf.* Nye, 1973); these spirals end only upon the removal of one party. Although the model is often used to explain international arms races (Richardson, 1947), it applies also to community disputes (Coleman, 1957), marital relations (Bach and Wyden, 1969) and intraorganizational conflict (Pruitt and Rubin, 1986).

'Debate'

In contrast to a fight, Rapoport (1960) suggested that the debate is an exchange of ideas about 'what is' versus 'what ought to be'. Through words and logic, parties endeavor to convert opponents to a competing point of view; the primary focus falls on cognitive conflict caused by different ideas, values, ideologies, or policies. A number of researchers have provided related models and studies (Brehmer and Hammond, 1973, 1977; Druckman and Zechmeister, 1973; Walcott, Hopmann and King, 1977).

Stages of conflict

Whereas Rapoport concentrated on the overall character of behavior in certain conflicts, other researchers have proposed models that describe conflict dynamics across a temporal sequence of stages or phases. Filley (1975) embellished upon Pondy's conflict 'episode' stages by expanding the list of antecedent conditions and adding methods of conflict resolution, such as problem solving. In a similar vein, Thibaut and Walker (1975) suggested a *process* stage when parties present evidence for their positions and a *decision stage*, when evidence is evaluated. Sheppard (1984) later elaborated upon that model (for details, see the section on 'Third parties').

Dual Concerns

Yet another thrust in the development of conflict models has been directed at 'conflict handling' or conflict resolution styles. Following Blake and Mouton (1964), Lawrence and Lorsch (1967) and Burke (1970), Ruble and Thomas (1976) proposed that these styles varied along two orthogonal dimensions: assertiveness (the degree to which one tries to satisfy one's own concerns) and cooperativeness (the degree to which one tries to satisfy others' concerns). In this two dimensional space, they pinpointed five conflict handling styles: avoidant (low assertiveness and low cooperativeness), accommodative (low, high), competitive (high, low), sharing or compromise (moderate, moderate) and collaborative (high, high). Although Blake and Mouton's (1964) original ideas were largely normative, this descriptive version of the model has withstood sustained empirical examination (Cosier and Ruble, 1981; Pruitt and Rubin, 1986; Rahim and Bonoma, 1979).

Thomas's Structural model

Lastly, in a shift away from attention to conflict processes, Thomas (1976) has set forth structural determinants of conflict behavior. They are: (a) each party's behavioral predispositions,

(b) respective social pressures, (c) respective conflict incentives and stakes in their relationship, and (d) jointly applicable rules and procedures. Thomas cited supporting research for each variable, but not necessarily for the existence of the entire set.

Discussion

All of these descriptive models address certain causes and dynamics of conflict. The Fight, Debate and Dual Concerns models emphasize conflict dynamics. Thomas's Structural model and the stage models (including Pondy's conflict episode model) represent attempts to combine both causes and dynamics. Over time, these models — and others in the same tradition — have shaped the study of conflict. Some of the historical ties between the models are evident above. Yet several of these models, which purport to describe actual conflict, have not been directly tested and verified in their entirety. When challenged, subscribers to Pondy's model, for example, can invoke only related research or studies bearing on some but not all of its parts. Even the models falling outside this criticism (e.g. Fight, Debate and Dual Concerns) are subject to another, namely the failure to specify (either by design or in use) fundamental assumptions. Three key but not necessarily explicit assumptions usually underlie such models. The first and third assumptions apply to the models as a group; the second, to each model individually.

A1. Conflict originates from a variety of possible sources. This assumption draws support from the creative juxtaposition of various narrowly focused empirical studies and the rich conceptual inventories developed by several researchers. Walton and Dutton (1969) noted nine sources of lateral (interdepartmental) conflict, Rahim and Bonoma (1979) identified 16 sources of intra-personal, intragroup and intergroup conflict, and March and Simon (1958) and Sheppard (1984) have set forth other categories. Nevertheless, few studies have empirically tested whether this variety actually exists, or which scheme is most descriptive.

A2. Conflict follows a predictable course or pattern. Every model above explicates or presumes this view, but differs from other models as to the specific number of identifiable stages or 'elements' in a particular pattern. There are also many models in addition to those listed in Table 1: cycles of escalation and de-escalation (Kriesberg, 1973), conflict dynamics (Rummel, 1979), learning (Patchen, 1970), power-dependency (Brett, 1984; Emerson, 1962) and systems models (Rapoport, 1960). Granting that some of these patterns are so general as to cover most any situation (e.g. Pondy's conflict episode) and that others are strongly limited to a certain type of conflict (e.g. Fights), there remains a surfeit of models whose patterns differ in describing the same fundamental phenomenon — conflict. Most descriptions are heavily conceptual and use data only for illustrative purposes. Research to date has concentrated not on complete patterns, but on selected aspects of and influences upon them, influences such as perceptual bias, mistrust (Zand, 1981), and mirror-imaging (White, 1961).

A3. Conflict is manifested in many ways, which have both positive and negative consequences. Despite an early and pernicious, lingering tendency to attribute largely dysfunctional effects to conflict, more and more researchers have pointed to positive dynamics and consequences. Starting with Coser (1956), theorists have contended that it can contribute to a healthy level of stimulation and activity in an organization, produce ideas of a quality superior to those produced without conflict, foster internal cohesiveness among groups, and test perceived power differences between parties in a way that causes adjustments to the real terms of relationships (Thomas, 1976). Rahim and Bonoma (1979) summed up this perspective by describing the

conflict-productivity relationship as an inverted-U curve, where conflict is most productive in a moderate amount and least productive at very low or high levels. For such assertions, there is a limited amount of empirical evidence (*cf.* Janis, 1972). But it seems especially important to make this assumption explicit, because in comparison to the previous two, it may not be as widely held. Although more voice is now given to the notion of mixed consequences of conflict, the dysfunctional view still seems to motivate and to underlie a great deal of research.

Implications

The three assumptions above have guided and constrained conflict research. The gaps in research to support existing models have often been conveniently and even glibly bridged with these assumptions. We believe that such assumptions should be identified and clarified with more regularity. Pondy (1967) pointed out that researchers undertaking assessments of the impact of conflict should openly state their criteria or values. He himself suggested that productivity, stability and adaptability were good criteria for evaluating organizational conflict (*cf.* Sheppard, 1984). Further, by openly considering the assumption about multiple causes, we can learn about hitherto neglected subjects such as the relative importance of individual causes, multiple causation in any one conflict (especially over time), and interaction effects. More research and model development could be directed to the positive aspects of conflict and mechanisms of conflict stimulation. In short, descriptive models of conflict and their underlying assumptions merit more careful examination and use.

Normative models of conflict

Normative models have also occupied prominent places in the literature. Several examples are described below. As we will suggest, they also have important underlying assumptions.

Conflict grid

One of the earliest and best known representations of conflict behavior highlights individuals' responses to conflict. Discriminating between the level of a manager's fundamental concern for production (results) and for people (valuing people and maintaining relationships), Blake and Mouton (1964, 1978) discriminated different orientations to management in a 'managerial grid'. This grid consists of five managerial styles: 9/1 (high concern for production, low concern for people), 1/9 (low, high), 1/1 (low, low), 5/5 (moderate, moderate) and 9/9 (high, high). The characterizations of these styles included the ways that managers would handle conflict. Blake and Mouton also strongly recommended 9/9 — collaborative behavior — as the most productive and advantageous style. (See also the previously mentioned descriptive research of Lawrence and Lorsch (1967), Burke (1970) and Ruble and Thomas (1976).

Conflict cycles

A second model of conflict, diagnostic in its formulation but largely normative in its use, takes the form of a conflict cycle (Walton, 1969). Certain substantive and emotional issues lead to triggering events that make the conflict manifest, and entail conflict behavior and consequences that then feed back into new or redefined issues. They may then instigate additional conflict cycles.

Although Walton's model resembles Pondy's, it differs in at least three ways. First, Walton's model is primarily concerned with interpersonal as opposed to intraorganizational conflict. Second, Walton designed his model as a basis for intervention. Finally, he treated substantive

and emotional issues as direct causes of behavior, whereas Pondy placed perceptions and emotions in an explicit intermediate stage between causes and behavior.

Systems 1–4

Likert and Likert (1976) delineated different responses to conflict in organizations. Like Blake and Mouton, they drew their ideas on conflict styles from their studies of different organization and management styles (Likert, 1961). Within their Systems 1–4 model, they advocate the System 4 style as the most sophisticated. It evinces a strong willingness to listen to and understand the other party, open and trusting communication, low use of power, development of opportunities for mutual influence, a desire to cooperate and a search for a joint, problem solving approach to conflict.

Interface conflict-solving

Finally, Blake and Mouton (1985) have recently proposed an action-oriented (process) model for resolution of conflicts between groups in organizations who work together frequently (e.g. line and staff, labor and management). The process calls for six main steps: (a) each group separately creates a model of optimal interface effectiveness, (b) the groups convene to develop a joint model — statement of a sound working relationship, (c) each group separately describes the conditions of the current interface relationship and identifies major problems, (d) the groups reconvene to develop a joint statement of the current working relationship, (e) each group identifies the operational changes needed and develops a joint list, and (f) the groups plan for implementation and monitoring of changes. Blake and Mouton provided several case studies to illustrate and substantiate this process.

Discussion

Like the descriptive models reviewed earlier, each of these normative models involved an effort to describe conflict processes and dynamics. However, these researchers went on to emphasize ways to change conflict behavior toward productive ends. Historically, normative models appeared simultaneous with and even before descriptive models, rather than after them, and failures to distinguish the two have created significant confusion. Thomas's Dual Concerns model and its measurement instrument have frequently been cited as exemplary of the normative perspective on conflict management, but Thomas (1986) has actively claimed that the model is not normative by design.

Important assumptions underlie this normative work:

A4. Conflict and conflict-handling behavior is adaptive. This positive view of human nature and ability corresponds with the humanistic trend in management theory inspired by Maslow (1954) and McGregor (1960). Thus responses to conflict are learned and can be relearned by direct analysis of past behavior and by education and behavior-shaping programs (Hocker and Wilmot, 1985; Wehr, 1979). On the other hand, scholars such as ethnographers (Lorenz, 1966; Scott, 1958) and Freudians (Freud, 1933; cf. Fromm, 1973) have argued that human aggression and conflict behavior are determined by biological or evolutionary roots and instinctual drives.

The evidence in research on organizational conflict is mixed. On the positive side, Deutsch and Krauss (1966) demonstrated that 'tutored communication' with participants in the Acme-Bolt trucking game did reduce conflict between subjects. A study of individuals' verbal styles in an intergroup context showed that styles changed when individuals had prior negotiating experience with one another or advice from outsiders (Weiss, 1985). Brown (1983) has reported on interventions designed to manage the 'interface dynamics' between warring groups and to

establish more productive relationships. But other studies that detail strong cultural norms and reports of efforts to intervene in cross-cultural disputes have suggested or produced less encouraging results (Cohen, Kelman, Miller and Smith, 1977; Doob, 1974; Weiss and Stripp, 1985).

A5. Conflict is to be managed with respect to its consequences (rather than its causes). This assumption underlies the emphasis that normative models place on responses to conflict. Taking conflict causes as givens, these models suggest that individuals learn to adapt to them and to manage dynamics once conflict has occurred. Alternatively, these researchers could take a stance in which individuals are assumed capable of anticipating and even affecting the causes of conflict. For some observers, this perspective would appear more consistent with assumption 3 than assumption 5 as stated. Each case lacks a coherent supporting argument.

A6. Collaborative behavior is strongly desirable as a way to manage and resolve conflict. Notwithstanding the differences in labels ('9/9', 'System 4', 'problem-solving'), the value of a collaborative style and the desirability of achieving integrative agreements have been simply taken for granted by some writers and widely acclaimed by others (Fisher and Ury, 1981; Follett, 1940; Pneuman and Bruehl, 1982). Justifications offered by Blake and Mouton (1978) have included a reduction in antagonism, healing cleavages, restoration of real and imagined injustices, amelioration of alienation and minimization of conformity. Pruitt (1983a) has pointed out that integrative agreements are likely to be more stable, to strengthen the parties' relationship, and to contribute to broader community welfare. Moreover, if both parties to a conflict have high aspirations and resist conceding, an integrative agreement may represent the only possible means of resolution.

Several empirical studies offer support for these claims. Cummings (reported in Folger and Poole, 1984, p. 41) found that pairs of negotiators using competitive styles reached stalemates in bargaining more often than pairs in which one style was competitive and one was collaborative. A study of organizational conflicts reported by middle managers showed that when superiors competed to resolve a conflict, subordinates viewed about half the solutions as 'bad', whereas all problem solving responses appeared 'good' (Phillips and Cheston, 1979). And in a one-on-one negotiation experiment, Pruitt (1983b) found that high joint benefits resulted from a high level of concern about one's own outcomes coupled with high concern for the other's outcomes.

Not everyone is willing to grant this assumption, especially when it is applied universally — that is, to all conflict. According to Thomas and Kilmann (1974), collaboration has its limitations, and Pruitt (1983a) has argued that the drawbacks of contentious behavior have been overplayed. Gladwin and Walter (1980) have offered one remedy: a contingency version of the Dual Concerns model based on the relative value of economic outcomes, the degree of relative power between the parties, the quality of the parties' relationship and the degree of their interest interdependence. But the fine points of this debate, which is relevant to negotiation research as well, remain to be articulated and compared.

Summary for conflict models

In this section, we identified and categorized a number of models of conflict prominent in the management literature. One group, which we labelled descriptive, has addressed conflict causes and dynamics largely from a detached, scientific perspective. The second — normative — group has taken a prescriptive approach to conflict stressing cooperation and collaboration.

Each group of models has been driven by important but usually implicit assumptions that we uncovered and discussed.

Descriptive and normative models together

Looking at the descriptive and normative models together, we see three additional assumptions.

A7. The dynamics of conflict can be (and should be) analyzed apart from the dynamics of its resolution. Within the domain of conflict research (and, for that matter, among it and the negotiation and third party domains), it is apparent that models generally do not address both conflict causes/dynamics and resolution. They have been segmented and treated as sequential rather than concurrent or cyclical. Models of conflict tend to focus on conflict initiation and escalation; models of conflict resolution (Thibaut and Walker, 1975) tend to ignore them, and *vice versa*.

Researchers need not make this assumption, however. Pondy (1967) and Sheppard (1984) have avoided it in their work. Similarly, those who investigate the communication process — the vehicle for expression of conflict and of its management — have underscored the drawbacks of proceeding by this assumption (Hocker and Wilmot, 1985; Weiss, 1985; Weiss-Wik, 1979).

A8. Interpersonal and small group processes may be examined apart from environmental and societal variables. As researchers have concentrated on the former, they have neglected or set aside the latter — factors such as organization and social structure, economic and political conditions and conflict norms (*cf.* Weiss and Stripp, 1985; Weiss, 1987). Over time, researchers and their audiences have come to presume, by default, that environmental variables are of little or no importance and that the process-centered models have validity across a variety of contexts. Only recently has research in one area, public sector labor relations, clearly suggested an alternative approach (Lewin, Feuille, Kochan and Delaney, 1988).

A9. Lessons from particular models of conflict dynamics and conflict resolution can be readily generalized across various actors, issues and settings. The Fight model has been used to describe the behavior of nations as well as individuals, and experimental researchers have expected the behavior of undergraduates to be representative of other groups. In the same vein, researchers have drawn conclusions from a mixture of experimental paradigms, from Deutsch's Acme-Bolt trucking game (Deutsch, 1960, 1962) to prisoner's dilemma (Rapoport and Chammah, 1965), from a buyer-seller negotiation (Pruitt, 1981; Siegel and Fouraker, 1960) to a 16-person, six-issue governmental simulation (Weiss, 1985). In short, researchers in this field have tended to blur lines between laboratory settings and *in situ* contexts, and between interpersonal and labor-management disputes (Wall, 1985) or international relations (Sawyer and Guetzkow, 1965).

Cross-fertilization *per se* has been fruitful. It has helped to produce a rich portfolio of intervention procedures and techniques such as mini-trials, problem-solving workshops (Hill, 1982), and ombudsmen (Silver, 1967). In research, ideas from one area of work have served usefully as stimuli for methodological innovation or hypotheses in another area. Such efforts are not at issue here.

The problem stems from importing conclusions wholesale without testing their validity for the actor or setting at hand. (See Allison, 1971; Gordon, Schmitt and Schneider, 1984; Sheppard, Lewicki and Minton, 1986; Weiss-Wik, 1983). Even transferring findings concerning aspects of the process as opposed to the substance of interaction may be problematic.

In addition to the foregoing assumptions, several of the conflict models here simply have

not been thoroughly tested or confirmed. Although it is the most frequently cited model for organizational conflict, Pondy's model has never been directly validated (Pondy, 1986). That model and others have risen to their places in the literature on face validity and inherent appeal to academics and practitioners alike.

In sum, while these models provide a foundation for understanding both conflict processes and conflict resolution, they have significant limitations. Underlying assumptions should be taken into account to understand the models and the historical development of the field and to plot directions for future research. Some of these directions are outlined at the end of this article, following the discussion of negotiation and third party models.

Models of negotiation and bargaining

Negotiation, as Walton and McKersie (1965, p. 3) succinctly suggested, denotes '... the deliberate interaction of two or more complex social units which are attempting to define or redefine the terms of their interdependence'. Actually, this definition applies to individuals as well as 'social units' such as groups and organizations. It also treats negotiation as a process wider than 'bargaining', which Gulliver (1979, p. 71) limited to 'the presentation and exchange of more or less specific proposals for the terms of agreement on particular issues'. The broader interaction, whether it is called negotiation or bargaining or both (interchangeably), has been approached by researchers in various ways.

This review concentrates on extant models. Like the conflict models above, they can be aggregated into descriptive and normative groups. We begin with a description of the dominant paradigm in this research domain.

The dominant paradigm: Walton and McKersie's four subprocesses

In 1965, Walton and McKersie went far beyond existing work (e.g. Deutsch and Krauss, 1960) and established a touchstone for the future by proposing an extremely rich theory of negotiation. It assumed a distinctly managerial point of view, took support from numerous research studies and practical union-management examples, and was formulated as a set of four 'subprocesses' as opposed to a single negotiation process. The four subprocesses are distributive bargaining, integrative bargaining, attitudinal structuring, and intraorganizational bargaining.

Distributive bargaining occurs when each party tries to maximize its share of fixed-sum payoffs. One party will lose what the other wins. To describe negotiating behavior from this point of view, Walton and McKersie considered negotiators' target points (preferred outcome goals) and resistance points (bottom lines), the effects of different intersections of two parties' ranges between those points, and various strategies by which to manipulate an opponents' perceptions of one's target and resistance points. Herein, a researcher would observe the extremity of negotiators' initial demands and the concession-making thereafter, paying special attention to their commitment to their strategies (see also Schelling, 1960).

For negotiating 'rights and responsibilities' as opposed to hard economic issues, Walton and McKersie proposed *integrative bargaining*, a process by which parties attempt to explore options to increase the size of the joint gain without respect to the division of payoffs. This kind of bargaining, or negotiation, tends to follow a joint problem-solving format and to benefit all parties. Parties must recognize and define a problem, search for possible solutions to it, evaluate them, and select one that maximizes joint gain. The critical aspect of this process is a willingness to share information combined with open communication.

The third subprocess, *attitudinal structuring*, refers to negotiators' efforts to influence the quality and nature of their relationship. Formally, attitudinal structuring is a socioemotional, interpersonal process by which parties attempt to change each other's perceptions, attitudes, and the 'climate' of the negotiations. Here the level of trust becomes central.

Finally, since the first three subprocesses treat complex social units such as organizations simply as unified actors, Walton and McKersie offered *intraorganizational bargaining* as an appropriate addition (see also Allison, 1971). This (fourth) component appreciates the boundary roles held by many negotiators and the sources of internal conflict within negotiating teams. It refers, in short, to the 'system of activities which brings the expectations of the principals into alignment with those of the chief negotiator' (p. 5). Much intraorganizational bargaining rests on the degree of internal control exercised by the leader and/or chief negotiator.

Discussion

When one looks back at all four subprocesses, their relationship is not clear. They could be regarded as a single model with four components, as four separate models (each subprocess as a model in itself), and in still another way, as a combination of models and 'generic processes'. In the third case, distributive and integrative bargaining have been accorded model status, while attitudinal restructuring and intraorganizational bargaining are viewed as generic processes that occur in all forms of negotiation.

Walton and McKersie's (1965) original work does not settle this question. In the years since, researchers have paid far more attention to the distributive and integrative subprocesses than to the other subprocesses. They have concentrated most on distributive bargaining, investigating it in whole and in part. Integrative bargaining was not investigated empirically until more recently.

For distributive bargaining, researchers relied on buyer-seller experiments (Siegel and Fouraker, 1960) to examine the impact of initial offers (Liebert, Smith, Hill and Kiefer, 1968) and the timing, frequency, magnitude, and rate of concessions (Pruitt, 1981). The variables that may best have captured the essence of Walton and McKersie's ideas were bargaining strategies such as 'toughness' (high level of expectation, extreme initial demands, small concession rates, and a generally unyielding posture) and its antithesis, 'softness' (see Axelrod, 1984; Bartos, 1970; Deutsch and Lewicki, 1970; Hammer and Yukl, 1977; Wall, 1985). Although toughness has received considerable support for maximization of individual payoffs (Bartos, 1970), no pure (as opposed to contingency) strategy has proved successful all the time.

With respect to Walton and McKersie's (1965) notion of integrative bargaining and the value of open communication therein, Pruitt and his colleagues have provided supporting studies. Pruitt and Lewis (1977) found that integrative agreements (high joint gain) resulted from noncontentious behavior (willingness to be flexible and to cooperate), information exchange and insight into an opponent's priorities. Other promotive determinants have included negotiators' concern with maximizing their own outcomes and their opponent's outcomes (Pruitt, 1983b), expectations of a future relationship with an opponent, accountability to others, and the pursuit of several approaches to achieve agreement (Pruitt, 1983b).

For each of these subprocesses — the distributive, the integrative — far more research could be cited. More will be presented and cited in the following section. But the gist of available research results should already be apparent.

Beyond that, one ought to note that research and models developed since Walton and McKersie's (1965) theory have not addressed the coexistence of the two — or four — subprocesses. Research proceeded in two streams, one distributive, the other integrative. As a result, the

two 'subprocesses', as Walton and McKersie labeled them, now have places in the literature as complete, distinct, and usually competing paradigms of negotiation.

One last point of confusion over Walton and McKersie's theory concerns its descriptive/normative qualities. Integrative bargaining, like collaborative behavior in conflict models, has been adopted for normative purposes, as we shall see below. The two authors' intent, however, was primarily descriptive.

Because of the history of negotiation research and the status individually achieved by the distributive and integrative processes, we believe they have also become paradigms. We divide our review of negotiation models accordingly, but provide a residual category for a few remaining models. Following the form of the preceding discussion of conflict, we also classify these models as descriptive or normative.

Table 2. Models of negotiation and bargaining

The dominant paradigm — Four subprocesses of negotiation (Walton and McKersie, 1965)		
	Descriptive	Normative
Distributive	Bilateral monopoly Siegel and Fouraker, 1960	Risk of conflict Zeuthen, 1930
	Three phases Douglas, 1962	Rational utility maximization Nash, 1950
	Bargaining power Chamberlain and Kuhn, 1965	Uncertainty and tactical manipulation Pen, 1959
	Learning process Cross, 1965, 1977	Superior set Champlin and Bogano, 1986
	Demand level/concession rate Pruitt, 1981	
	Strategic choice Pruitt, 1981	
	Multilateral public sector Lewin, Feuille, Kochan and Delaney, 1988	
Integrative	Framework/detail Ikle, 1964; Zartman and Berman, 1982	Integrative decision-making Filley, 1975
	Integrative negotiation Pruitt, 1981, 1983	Principled negotiation Fisher and Ury, 1981
		Creative problem-solving Pruitt and Rubin, 1986
Other	Developmental/cyclical Gulliver, 1979	Contingency bargaining Lewicki and Litterer, 1985
	Field theory Spector, 1977	

Distributive models of negotiation

In distributive bargaining research, the normative modelers historically set the tone by proposing an economic optimization approach based on a series of assumptions. More descriptive, empiri-

cally verifiable models evolved later in the fields of psychology, sociology and political science, and they have dominated negotiation research in the past 20 years. Their historical position notwithstanding, we will review the descriptive models first in order to give them prominence and to maintain the same order used in discussing conflict models.

Descriptive distributive models

These models were based on observations of negotiation behavior *in situ* as well as in experimental laboratories. Some of them emerged before Walton and McKersie's (1965) work. In general, however, they concentrated on individual behavior in negotiation.

Bilateral monopoly. In one of the earliest studies, Siegel and Fouraker (1960) set out to test the assumptions underlying economic models of negotiation in an experimental situation with distinctively economic parameters. One buyer and one seller would negotiate the price and quantity of one product. Experiments manipulated the amount of information available (complete or incomplete), the number of bid transactions (one versus multiple), and the payoff structure of outcomes. Although not itself a bargaining model, this experimental paradigm served as the basis for models of and later research on distributive behavior.

Three phases. The earliest effort in the organizational literature to describe systematically an actual labor-management negotiation — an effort Douglas (1962) carried out as a participant-observer — led to the proposal of a 'stage model'. Douglas suggested that negotiation passes through three phases: Phase 1, where negotiators establish the negotiating range; phase 2, where negotiators grapple with their commitments to their initial positions, explore others' commitments, and jockey for position; and phase 3, when the parties reach an insurmountable point of decision to settle or to declare stalemate. Douglas based this model on her direct observation of changes in negotiators' behavior, her study of negotiation transcripts, and questionnaires and interviews. However primitive the model appears today, it has been used, in whole or in part, by many researchers (Blaker, 1977; Gulliver, 1979).

Bargaining power. Chamberlain (e.g. Chamberlain and Kuhn, 1965) added a twist to existing work when he formulated the concept of bargaining power: the capacity of a party to produce an agreement on its own terms. This power directly relates to an opponent's inclination to agree, which depends on the ratio of his or her cost of disagreeing with the party to the costs of agreeing. Chamberlain considered economic and non-economic costs and placed more emphasis on their perception as opposed to 'objective' determinations. Unlike earlier theorists, he generally rejected the idea of a formally defined contract zone. In this view, bargaining is driven by manipulation of perceived costs. (For related contemporary work, see Bacharach and Lawler, 1980. See also Emerson, 1962; Gruder, 1970; Raven and Kruglanski, 1970; Tedeschi and Bonoma, 1977).

Learning process. Early researchers (e.g. Zeuthen, 1930) attempted to predict specific bargaining outcomes from concession-making behavior under rather restrictive assumptions, so their successors set about lifting them. Cross (1965, 1977) considered the processes used by negotiators who do not have perfect information about their opponent. Following the lead of Hicks (1963), Cross argued that bargainers do not make static estimates of optimality, as suggested by Nash (1950); instead, they make relativistic judgments of their own costs and opportunities as they vary during the bargaining process. Bargainers strive to maximize their outcomes, but they

do so by continually adjusting their own concession rates with respect to their opponents' concessions. Through such 'learning', negotiators maximize their share of the pie.

Demand level/concession rate. Pruitt (1981) further elaborated upon the dynamics and effects of concession-making. His 'model' encompasses negotiators' demand levels, concession rates, the speed at which demand level declines over time and negotiation outcomes. In addition to his investigations of the effects of specific variables, such as position loss and image loss, limit and level of aspiration, and time pressure, Pruitt described how bargainers' expectations and concessions can 'match' or 'mismatch'.

Strategic choice. A simple model proposed by Pruitt (1981) takes a somewhat broader view of bargaining than its predecessors. In this model, a bargainer must choose, at several points in any given negotiation, among three basic strategies for moving toward agreement; conceding unilaterally, standing firm and employing pressure tactics (competition) or collaborating with the other party in search of a mutually acceptable solution (coordination). What a negotiator decides to do at each point will determine what happens subsequently. Pruitt contended that the choice of one strategy makes the others less likely, and that conditions that enhance (or diminish) the probability of adopting one strategy diminish (or enhance) the probability of adopting the others.

Multilateral public sector. Most recently and with the broadest of perspectives, researchers in public sector labor relations have examined multilateral as opposed to simple bilateral, or dyadic bargaining. Lewin *et al.* (1988) have developed a corresponding framework for analysis, if not a model *per se*, in which they include the multiple interests and groups prevailing within the management and union organizations. This research has substantiated the relevance and value of the intraorganizational bargaining subprocess described by Walton and McKersie (1965; *cf.* Kochan, 1975).

Normative distributive models

As stated earlier, several normative distributive models preceded descriptive models of negotiation. The normative models, which were driven largely by economic assumptions and variables concerning human behavior, merit coverage because of their prominence as well as their effect on contemporary descriptive research.

Risk of conflict. In one of the earliest works in this field, Zeuthen (1930) construed negotiation as a series of offers and counteroffers in which individuals continually had to decide whether to hold firm and reiterate their previous demand or make a concession toward the other's demand. In Zeuthen's view, each decision calls for an assessment of the risk of enduring conflict with the other negotiator (and the potential loss if both stay firm) against the potential gain for making a concession to reduce the conflict. Both negotiators attempt to manipulate their own and their counterpart's assessments. Zeuthen constructed an equation to predict the maximum risk that a rational bargainer would be willing to take instead of conceding, and thereby established a framework for specifying who should make concessions at particular points in a negotiation.

Rational utility maximization. Years later, Nash (1950) set forth a theory of negotiation rooted in game theory and its heavily economic orientation to conflict. He assumed that negotiators rationally attempt to maximize their own gain or utility and that they have perfect and complete

information about their own and their counterparts' utilities. Unlike other game theorists who concentrated on individual gain, Nash focused on the combination of bargainers' payoffs and argued that neither bargainer would agree to a settlement which was not optimal for both of them — that is, not 'pareto-optimal'. Based on these and related assumptions, Nash explored situations involving symmetric and asymmetric utility functions for negotiators and proposed several types of 'solution frontiers' or likely areas of negotiator settlement.

Uncertainty and tactical manipulation. Pen (1959) went beyond both Zeuthen and Nash to argue that bargainers do not simply maximize utility (money) and do not possess complete information about their opponents. Outcome preferences can be heavily influenced by psychological, market and political factors that tend to create intense preferences for some outcomes over others, and these 'peaks' (ophelimity values) do not necessarily correspond to the simple utility functions proposed by Nash and other game theorists. Bargainers should tend to move toward these most-preferred ('satisficing') outcomes or target points instead of continually striving to maximize outcomes. (Pen also contended, in contrast to Zeuthen's idea of common 'maximum risk', that bargainers differ in their tendencies and predispositions to assume risk).

Superior set. A final normative distributive model addresses a party's choice between negotiation and arbitration to settle a dispute. Champlin and Bognanno (1986) assumed that each party can calculate the expected utility obtainable from a negotiated agreement and compare it to the expected utility from disagreement, where disagreement triggers the use of arbitration. Either side can invoke arbitration and guarantee itself an outcome no worse than the arbitration outcome.

Within this model, the expected utilities from arbitration that each party calculates for itself constitute a 'threat point'. The 'superior set' is the subset of the attainable utility set that is no less preferred by both parties than arbitration. Finally, the 'contract zone' denotes the collection of points in the superior set that are preferred by both parties to all other points in the superior set (that is, the contract zone contains pareto-optimal outcomes). Champlin and Bognanno (1986) showed that threat points within the attainable utility set — 'interior' set points — lead to superior sets, contract zones, and agreement, whereas points outside the attainable utility set eliminate the possibility of agreement.

Discussion. All of the foregoing models of negotiation address the behavior of negotiators in competitive, win-lose settings. The development of the models was initiated and dominated by researchers who took a quasi-economic perspective on negotiating behavior. Therein lies an important assumption.

A10. Negotiators are economically rational and seek to maximize economic outcomes. Almost all of the distributive models, whether normative or descriptive, assume that negotiators make decisions based on principles of economic rationality (*cf.* Rapoport and Chammah, 1965) and pursue behavioral strategies that will maximize economic outcomes.

The descriptive models often provided supporting data to confirm the assumption, or lead to further research designed to prove, challenge or temper the assumption. Siegel and Fouraker's (1960) work was based on experimental studies. Although her methods appear primitive by today's standards, Douglas's (1962) model was anchored by direct observation of negotiations *in situ*. With regard to follow-up research, throughout the late 1960s and early 1970s, a plethora of partial models and social psychological research studies dominated the literature. Many of these studies were designed to explore the impact of personality and situational variables

on negotiation outcomes, particularly outcome maximization. Examples of partial models include the effects of selected personality traits on negotiation outcomes (Hermann and Kogan, 1977; Rubin and Brown, 1975; Terhune, 1970) and lying and truth telling (Lewicki, 1983). Selected variable studies are almost too numerous to list. Researchers have investigated the nature and effects of negotiators' motivations, cognitions, verbal styles and constituencies as well as time pressure, conflict size and location (turf) and a multitude of negotiation strategies and tactics. Most of these studies have used one of several popular experimental games and paradigms. For several systematic reviews, see Bazerman and Carroll, 1987; Brett, 1984; Deutsch, 1973; Druckman, 1977b; Hamner, 1980; Morley and Stephenson, 1977; Rubin and Brown, 1975; Swingle, 1970.

While descriptive models often provided supporting data to confirm the above assumption (A10), the normative models have been at the center of considerably greater debate. Nash intended his model to be descriptive, but researchers who followed him (Braithwaite, 1955; Harsanyi, 1965; Raiffa, 1953; Shapley, 1953) challenged assumptions such as rationality (preference maximization, means-ends calculus), bargainers' common acceptance of the definition of a situation, and perfect information. Today scholars generally treat these models and their implications as ideal standards, but only direct empirical tests, of which there have been few (Greenhalgh and Neslin, 1983; Laing and Olmstead, 1978), will settle the matter.

The models selected for Table 2 represent attempts to capture the distributive negotiation process as a whole or at least its perceived core — in the positioning of initial demands, the exchange of concessions, and the search for a settlement. By and large, the models set aside consideration of integrative processes and gains (*cf.* Nash, 1950). With only one exception (Lewin *et al.*, 1988), they also reflect presumptions that the process of negotiation between two individuals does not differ significantly from negotiations between two groups or organizations, and that the study of bilateral negotiations provides sufficient understanding of trilateral and other negotiations (variations of assumption 9). We will return to discuss these assumptions at the end of this section.

Integrative models of negotiation

Although distributive models antedate and outnumber them, several integrative models of negotiation have been developed since Walton and McKersie's (1965) work. We begin with descriptive forms and then turn to the highly salient normative models.

Descriptive integrative models

Framework/detail. In a rich, insightful discourse on diplomatic negotiations, Ikle (1964) suggested that reaching agreement entails a two-stage process called Framework/Detail. Through a confrontation of proposals, parties first seek a compromise that establishes some framework of broad objectives and principles. Then they draw out a number of detailed points of agreement. The framework defines the subset of points that is debatable, while the detail phase permits the debate and 'packaging' of specific issues to construct a settlement acceptable to both sides.

If Ikle introduced this model, Zartman and Berman (1982; Zartman, 1977) elaborated upon and popularized it. They delineated three phases: diagnosis, formula and detail. During the diagnosis phase, parties affirm their need to change the current order of things, review the history of their relationship, and prepare their positions. During the formula phase, negotiators attempt to develop '... a shared perception or definition of the conflict that establishes terms of trade, the cognitive structure of referents for a solution, or an applicable criterion of justice ... Finding the formula means confronting the basic elements of the controversy, and either

dealing with all of them or, recognizing their existence, putting some aside for later consideration' (Zartman and Berman, 1982, pp. 95, 109). Finally, the detail phase involves working out the specific elements of the agreement to make it consistent with the basic formula.

The model implies that parties move from diagnosis to formula to detail as lock-step phases, but the authors have contended that actual negotiations frequently fluctuate between these stages. They also noted that in some cultures, negotiators may pursue the stages in a different order. Further Zartman and Berman's (1982, p. 11) work is not just descriptive; it 'is designed to suggest the way to go about negotiating'.

Integrative negotiation. Several authors have also amplified Walton and McKersie's (1965) ideas by providing an empirical description of the integrative negotiating process. Pruitt (1981, 1983a) and his colleagues (Pruitt and Carnevale, 1982) have done the most in this area. No single publication by Pruitt draws all of his work together in one model, but he has built a solid foundation for understanding by elucidating the antecedents to negotiation that define the framework for integrative agreements, the different forms taken by integrative agreements, and the tactics used by negotiators to reach those agreements.

Discussion. Assessing both the Framework/Detail model and Pruitt's work is difficult, albeit for different reasons. For the Framework/Detail model, little empirical research seems to exist. The evidence offered thus far has been anecdotal (Zartman and Berman, 1982), with the exception of one case study (Weiss, 1987) in which the negotiators who were interviewed accepted the usefulness of the model for a post-mortem description but asserted that they did not use it in the actual negotiations. On the other hand, Pruitt's numerous empirical studies, which are largely based on a modified (three-product) buyer-seller experimental game, do not test the integrative model as a whole. There is also little empirical work beyond Pruitt's own by which to cross-evaluate his results.

Normative integrative models

The concept of integrative negotiation rests on a value system that stresses interpersonal trust, cooperation, and a search for mutually acceptable outcomes. These qualities can be seen in both normative models of conflict and normative models of integrative bargaining.

Integrative decision-making. Filley (1975) was the first scholar to expound upon Walton and McKersie's (1965) ideas on integrative bargaining from a highly normative orientation. His 'integrative decision-making' model is based on six steps: (a) review and adjust relational conditions between the parties (i.e. create an environment that promotes equality, cooperation, communication, and information sharing); (b) review and adjust perceptions; (c) review and adjust attitudes (i.e. create processes that maximize information-sharing and 'clear the air' of past hostilities and negative attitudes); (d) define the problem; (e) search for alternatives; and (f) achieve consensus. Filley cited a limited amount of related social science research to support each step.

Principled negotiation. Six years later, Fisher and Ury (1981) proposed 'principled negotiation' — a model for maintaining good relations with an opponent without necessarily yielding on the issues at stake. Rejecting previous approaches as either rigidly competitive or naively cooperative, the two authors set forth a fourfold approach: (a) separate the people from the problem (be 'hard' or 'tough' on the issues but 'soft' or 'cooperative' on the people); (b) focus on interests, not positions; (c) invent options for mutual gain; and (d) insist on using objective criteria

to judge solutions. This simple, widely popular approach has intellectual roots in much of the work already reviewed here.

Creative problem-solving. Pruitt and Rubin (1986) have translated much of Pruitt's earlier descriptive work into a set of prescriptions for effective problem-solving. These prescriptions entail: (a) asking whether there really is a conflict of interest; (b) analyzing one's own interests, setting reasonably high aspirations, and being ready to commit oneself to them; (c) seeking a way to reconcile both parties' aspirations; and if necessary, (d) lowering aspirations and continuing to search. Of the three models, Pruitt and Rubin's proposal is most closely tied to empirical research findings.

Discussion. The first two normative integrative models — and especially 'principled negotiation' — have achieved a high degree of visibility and support from social scientists. These models seem to share the favor accorded collaboration in conflict research (see assumption 6). But Fisher and Ury (1981) did not cite research that preceded the development of their model or studies that confirm its effectiveness in achieving 'wise, efficiently achieved outcomes'. A few writers have challenged it by assertion (e.g. White, 1984), but we are not aware of any empirical tests of the model as a whole.

Other models

Three more models of the negotiation process deserve mention in this review. While they are neither explicitly distributive or integrative in intent, we consider the first two as descriptive and the third as normative.

Developmental/cyclical

Gulliver (1979) followed Douglas' (1962) lead in the ethnographic tradition by deriving a negotiation model from studies of actual negotiation cases in East Africa and Western industrial relations. This model combines two processes: a 'cyclical' process of information exchange and strategy formulation and the development of a negotiation in stages over time. In cyclical process, which continues throughout a negotiation, negotiators exchange information, receive and process it, reconsider and perhaps modify their strategies and reinforce or reformulate their expectations of the other negotiator. Expectations lead to tactical decisions that a negotiator communicates to the counterpart, thereby providing new information and triggering a new cycle.

As Gulliver saw it, negotiators evolve through a series of developmental stages as they grapple with the information cycles. This series begins with a conflict that leads to a crisis and a search for an 'arena' for negotiations. Then the negotiators define agendas, clarify differences, identify possible areas of agreement, and move to narrow differences in order to achieve a final bargain. The outcome is then finalized and executed. (The heart of this process resembles Douglas' (1962) Three Phases model).

Field theory

Spector (1977) relied on a Lewinian field-theory paradigm to describe and to synthesize the impact of personality, perception, expectations, persuasion, and the interaction of these factors on the dynamics of dyadic negotiation. His model attempts to capture both causal relationships and the temporal flow of a 'stage' or 'phase' model of negotiation.

Contingency Bargaining

Finally, a number of very new normative models of negotiation have been developed by researchers who advocate the use of both distributive and integrative approaches depending upon the characteristics of a dispute, the overall goals of the parties, their perceptions of one another, and the strategies they desire to pursue. Early formulations of these models appeared in Ware (1980) and Lewicki and Litterer (1985). More recently, Lax and Sebenius (1986) have discussed the twin processes of 'claiming value' (distributive bargaining) and 'creating value' (integrative bargaining).

Summary for negotiation models

This section described many descriptive and normative models of negotiation and bargaining. The paradigm identified as dominant (Walton and McKersie, 1965) entails four subprocesses, two of which — the distributive and integrative processes — can be seen as separate categories for classifying a number of other negotiation models. These models and related research have actually developed along separate tracks.

Like the conflict models reviewed earlier, significant assumptions have figured in this evolution. Some of them initiated it, while others have arisen during it. On the whole, however, the assumptions have rarely been challenged.

Assumptions

A11. Any negotiation situation, taken as a whole, is either purely zero-sum or purely non-zero-sum. In the past, researchers have defined situations one way or the other and applied the appropriate model or in some cases, reversed the procedure. More recent writing, which echoes Walton and McKersie (1965), suggests that most situations contain both zero-sum and non-zero-sum factors and that negotiators' own perceptions of them will drive their behavior (Greenhalgh, 1987a; Lax and Sebenius, 1986; Lewicki and Litterer, 1985).

A11a. An entire negotiation can be described and explained by either a distributive model or an integrative one. As a derivative of assumption 11, this view has been sustained by the *de facto* separation of the two areas of negotiation research. More importantly, the assumption has been implicitly encouraged since few models within either area have been directly tested empirically or examined in rich, varied settings. Hundreds of early studies explored negotiator behavior in one-on-one, zero-sum, single issue experiments with numerically defined solutions such that only distributive behavior could be observed. Generalizing such findings to all negotiation situations (on the presumption that the experimental setting captured the 'essence' of negotiation) represents an extraordinary leap of reasoning beyond the bounds of the experimental paradigms.

A12. There is a definitive way to negotiate well. This assumption is fundamentally synonymous with the descriptive versus normative distinction. The normative models — whether distributive or integrative — assume that there is a 'best' way to negotiate. Earlier models of negotiation (i.e. those developed prior to the mid-1980s) developed their normative prescriptions based on a prior definition of most negotiation problems as either zero-sum or non-zero-sum (assumptions 11 and 11a). More contemporary normative strategies have continued to distinguish zero-sum versus non-zero-sum situations, but suggested that both types of situations exist. Thus, the choice of a 'best' negotiating strategy depends on the resolution of one or more *a priori* contingencies such as the structure of the negotiation problem, goals of the negotiating parties,

or length of the expected relationship between the parties (e.g. Johnson, 1985; Lax and Sebenius, 1986; Lewicki and Litterer, 1985). Only research on the validity of these contingencies, or models which do not begin with a positive affirmation of assumptions 11 and 11a (e.g. Ikle (1964) or Zartman and Berman (1982)) will truly test this assumption.

The early normative models (e.g. Integrative Decision-Making, Principled Negotiation) also had an implicit bias toward collaboration and integrative negotiation (assumption 6). That assumption, and its associated set of values, are evident in the current emphasis on integrative bargaining in the academic and popular literature. However, as in the writings on conflict, this assumption is not always explicit or when explicit, carefully supported.

Despite the four possible combinations of distributive and integrative, and of descriptive and normative lines of work, we have primarily seen an early emphasis on descriptive distributive models and a recent shift toward interest in normative integrative ones. The shift probably stemmed from the assumptive and value systems of the social scientists who teach and do research. Whatever the reason, normative distributive and descriptive integrative models have lacked both advocacy and research support. Given the apparent success of some popular ideas about the former models (e.g. Cohen, 1980) and the empirical thrust of the latter, it would be valuable to expand the scope of existing research enough to include them.

It is also important to reiterate assumption 9, developed in the conflict models section: *Lessons from particular models of conflict dynamics and conflict resolution can be readily generalized across various actors, issues and settings*. Not only does this assumption hold most strongly for models of negotiation, but several derivatives can be proposed.

A9a. The dynamics of negotiations between two individuals adequately represent negotiations between two groups or organizations.

A9b. Generalizations about bilateral negotiation extend to multilateral negotiation. Both of these assumptions tend to be most evident in literature that emphasizes negotiation processes. Although some recent work (Lax and Sebenius, 1986) tends to move away from them, these assumptions still enjoy considerable (albeit unjustified) support (*cf.* Sheppard *et al.*, 1986).

A9c. Research findings derived from single issue negotiations in simple game-like experiments can be generalized to complex, multi-issue negotiations in real-life settings. Most empirical research on negotiation has been derived either from college students (who are also unsophisticated and inexperienced negotiators) or from selected studies of labor management negotiators. Future research must articulate the differences that might occur as a function of issue structure and context, and examine the behavior of experienced negotiators in these contexts.

Finally, we state three other assumptions that have tended to dominate model building and testing in negotiation.

A13. All types of problems are negotiable.

A14. All parties want to negotiate and are able to negotiate.

A15. The essential part of negotiation takes place at the negotiation table. The failure to examine any of these three assumptions empirically is largely grounded in the way researchers have framed the negotiations they have studied and in the tendency to study negotiation in simulations under laboratory conditions.

Assumptions 13 and 14 have raised little if any attention because of the types of problems

chosen for research. Researchers have failed to specify whether there are some types of problems that do not lend themselves to negotiable solutions, or confirmed this empirically. With regard to assumption 14, all people are assumed to have the skills to negotiate, and negotiation research has either focused on those people who have the motivation to negotiate, or directly manipulated this motivation. We know very little about the impact of one or both sides' refusal to negotiate on the evolution of the negotiation process, except that mutual refusal usually leads to either deadlock or third party intervention.

Finally, assumption 15 derives in part from the failure to study long-term negotiation relationships in real-world environments. Laboratory negotiations are artificially framed and bounded such that the parties come to the negotiation without prior history or experience to shape current expectations and intentions and are presented with a problem unimportant to them. In contrast, longitudinal studies of actual negotiations stress the critical importance of analyzing any formal negotiation as part of the long-term relationship between the parties (e.g. Greenhalgh, 1987b; Saunders, 1987). In these relationships, what occurs in the interim between 'negotiations' can also be studied, and may not only affect the negotiations but have far more significance than the negotiation itself.

In the end, and most importantly, this review has pointed up the tendency to treat Walton and McKersie's distributive and integrative subprocesses as separate and distinct models. That does not appear to have been the architects' intent. Indeed, researchers have yet to explore fully the possible value of Walton and McKersie's contribution, that is, to determine the validity and explanatory power of their notion of subprocesses. Putnam's (in press) descriptive framework and Lax and Sebenius's (1986) normative work in this area represent beginnings of a new effort to reconsider the most valuable way to treat them.

Models of third party processes

In this final section, we turn to the role played by third parties in dispute resolution and review models concerning their activities. By definition, third parties usually do not have a strong partisan position on the substantive issues in dispute; rather, they attempt (as their *raison d'être*) to help parties reach a settlement, whatever its particulars may be. Third parties can be invited or uninvited, act formally or informally, operate individually or on behalf of some organization or constituency, be more or less 'neutral', be advisory or directive in their actions, and favor the substance (outcome) and/or procedure (process) in their intervention. These differences and others not mentioned here have all influenced research and model development.

Historically, this research has been segmented according to third party style and the social context in which it occurred. Thus, for example mediation, arbitration and process consultation have all been examined in the collective bargaining context (Douglas, 1962; Northrup, 1966; Walton, 1969), as has much research that compares the styles (Kochan and Jick, 1978). These styles have also been contrasted to approaches to grievance handling behavior (Lewin, 1987; Lewin and Peterson, 1988). Examples of the social contexts studied include adjudication in the courts (Vidmar, 1986; Wall and Schiller, 1983) international relations (Jackson, 1952), and formal organizations (Kolb, 1983; Sheppard, Saunders and Minton, 1987). Unfortunately, researchers did not reference one another's work until recently, so most third party research developed in relative isolation. This fragmentation (largely by discipline) prevented researchers from interpreting their areas of specialization as parts of third party processes as a whole. It also led to a general failure to contrast various third party styles within the same context,

and a failure to compare the impact and effectiveness of styles across contexts. Both consequences have hampered model development.

This portion of our review begins with two paradigms that do address more than one third party style. Each identifies and provides means for differentiating several styles. Models of individual third party styles, such as mediation and arbitration, are reviewed in a subsequent section.

The dominant paradigms

Thibaut and Walker's process/decision control

This paradigm derived from a series of research studies designed to test the efficacy of the American judicial approach to resolving legal disputes. Thibaut and Walker (1975) proposed that legal dispute resolution has two stages: a process stage, comprising procedures used by both sides to resolve a dispute (e.g. presentation of evidence), and a decision stage during which evidence is evaluated and the outcome of the conflict is determined. The amount of control exercised by the third party in each stage permits differentiation of several third party styles: 'bargaining' (third party present but with little control over either stage), mediation (control over the process stage), arbitration (control over the decision stage), autocratic (control over both stages), and moot (control over both stages shared with disputants). The authors reported results of several laboratory studies designed to test the effectiveness and perceived fairness of each of these control orientations.

Sheppard's matrix model

Sheppard (1983, 1984; Lewicki and Sheppard, 1985) has significantly reformulated, refined and extended Thibaut and Walker's two-stage model. First, he suggested four possible forms of third party control: process control (how disputants interact during dispute resolution), content control (the substantive resolution of the dispute itself), motivational control (the source of power the third party uses to influence the disputants, e.g. persuasion, legitimate authority, threats and promises), and control used only at the request of a disputant. Second, Sheppard highlighted a factor only implicit in Thibaut and Walker's model, namely, the timing of a third party's intervention. Intervention timing is best described through a stage model of conflict or negotiation; according to Sheppard, third parties can intervene in the definition, discussion, alternative selection or reconciliation stages.

If the four forms of control and four stages of intervention timing are combined as a 16-cell matrix, entries (representing observed behaviors) can be made into various configurations of cells to distinguish third party styles. Observations of mediators, for example, suggest that they employ all four forms of control in all stages except reconciliation. Sheppard also identified styles previously neglected by researchers, such as inquisition (process, content, and motivational control in all four stages) and 'providing impetus' or 'kick in the pants' (process, content, and motivational control in the definition and reconciliation stages).

This paradigm addresses two other areas of concern in the description and explanation of third party behavior. The first has to do with a third party's motivations for intervention. Besides the commonly cited interest in effective dispute settlement, Sheppard persuasively presented alternative criteria such as efficiency (conserving time and resources), disputant satisfaction and perceived fairness. Second, the choice of an intervention strategy may also rest on specific dimensions of the conflict itself: for example, the characteristics of the disputants, the type of conflict, or the setting.

Discussion

Like the dominant paradigms of Pondy (1967) and Walton and McKersie (1965), neither Thibaut and Walker's (1975) nor Sheppard's (1984) model has been empirically tested, let alone validated, in its entirety. In the case of Thibaut and Walker, we still do not know if in reality, mediation can be distinguished from arbitration and each of the three other third party forms on the basis of differences in the type of control exerted (process or decision). Do mediators actually attempt to control only the process? Does this rough dichotomy provide sufficient means by which to differentiate and to describe third party forms? Sheppard's model suggests the need for far more precision.

Nevertheless, this Process/Decision Control model provided the initial — and for many researchers, continuing — basis on which to consider and to compare various third party processes. Further, it is a touchstone for an important, ongoing debate on the relative value of process versus outcome control in third party dispute resolution (see Brett, 1986; Folger, 1986).

Sheppard's model, which is not directly supported as an integrated whole, is based on numerous empirical studies. The third party styles formally identified for the first time with the help of the model (e.g. inquisition and 'providing impetus') have now been supported at least by the self-reports of experienced third parties (Sheppard, 1983). The model is stimulating considerable research (Sheppard, Minton, Blumenfeld-Jones, Hyder and Deeb, 1987) that is ultimately likely to test the full model itself. With respect to the descriptive and normative delineation pursued throughout this review, Sheppard proposed the model as descriptive. However, the model readily lends itself to a number of normative prescriptions.

Lastly, Sheppard's model bears significantly upon our concern over assumptions. With its four stages, the model is one of the few to encompass aspects of conflict causes as well as conflict resolution, so it essentially responds to reservations about assumption 7. In other ways, like Pondy (1967) who asserted that researchers should openly state their criteria or values concerning conflict, Sheppard has drawn attention to two new assumptions.

A16. Third parties are motivated solely by the desire to resolve disputes effectively. Sheppard not only challenged this assumption of singleminded motivation but suggested alternative motivations: efficiency, disputant satisfaction, and/or maintaining one's control. The validity of these alternatives and the original assumption could be determined by empirical research.

A17. A conflict should be resolved, not allowed simply to run its course. Though Sheppard did not point out this assumption, the assumption above (A16), coupled with the gist of the third party research described below, surfaces it. A17 differs from A3 (positive and negative consequences of conflict) and A5 (responding to consequences rather than causes). Here the question is not how to resolve conflict but whether to (always) resolve it or let it run its course. Assuming an answer has precluded debate of the question, and this assumption, like others, is one to which we will return.

Models of separate third party processes

The broad scope of the above paradigms notwithstanding, most of the models and research on third parties consider only a single process or style. In particular, the literature has concentrated on mediation and arbitration, so we highlight them below. Models of inquisition and process consultation are also described briefly. As in the earlier reviews of the conflict and negotiation literatures, we shall distinguish between the descriptive and normative varieties.

Table 3. Models of third party processes

Dominant paradigms process/decision control (Thibaut and Walker, 1975)			
Matrix model (Sheppard, 1984)			
	Descriptive	Descriptive-Normative	Normative
Mediation	Dealmaking Kolb, 1983 Orchestrating Kolb, 1983		General guide Jackson, 1952 Mediation tactics and contract zone Stevens, 1973 Megaprocess Folberg and Taylor, 1984 Twelve stages Moore, 1984 (Mediator) strategic choice Carnevale, 1986a
Arbitration		Conventional procedures and techniques Elkouri and Elkouri, 1985 Final offer Feuille, 1979	
Other	Inquisition Sheppard, 1983		Process consultation Walton, 1969 Problem-solving workshops Burton, 1969

Mediation

From the perspective of the Thibaut and Walker (1975) paradigm, mediation entails high control over the process of dispute resolution, but low control over the outcome. By definition, mediators employ a variety of strategies and tactics to initiate and facilitate interactions between disputants, but leave the final resolution or terms of settlement in the hands of the disputants. Thus mediation primarily relies on facilitating negotiation among disputants. This third party process has been used in multiple contexts: civil cases as an alternative to litigation (Wall and Rude, 1985; Wall and Schiller, 1983), small claims disputes (Vidmar, 1985, 1986), marital disputes (Haynes, 1981; Kressel, 1985), industrial relations conflicts (Brett and Goldberg, 1983a; Kochan and Jick, 1978; Lewin *et al.*, 1988; Maggiolo, 1971), intergovernmental disputes (Susskind and Ozawa, 1983) and environmental disputes (Bacow and Wheeler, 1984). (For reviews of the multiple applications of mediation, see Folberg and Taylor, 1984 and Goldberg, Green and Sander, 1985).

Descriptive models of mediation

Kolb (1983) studied the 'role' taken by mediators, loosely using the term as a label to describe both third party cognition and action. Cognition included the mediator's view of previous negotiations, assessment of the parties' needs, explanations of concessions, and evaluation of his or her contribution. Action or observed behavior includes the mediator's theme in formal

presentations to parties, channeling of interparty communication, and changes in the third party role over time. Based on these variables, Kolb described two roles that can be seen, essentially, as alternative models of mediation.

Dealmaking. As a dealmaker, the mediator treats the parties' previous efforts at issue resolution as past history, and considers his or her entry as the beginning of a wholly new process. The dealmaking mediator tends to see parties' demands as unreasonable and based on lack of experience; he concentrates on substantive issues and explains concessions as the result of pressure from the mediator. In action, this role can be frenetic, for the mediator tends to separate the parties and to shuttle back and forth between them. Not just a messenger, however, the mediator is an advocate, changing over time from a 'logical persuader' to a 'headbanger', all in order to forge a deal among the parties,

The elements of this model arose from Kolb's participant observation of federal and state labor mediators (recall Douglas, 1962). By asking them to describe mediation and their preferences for cases, and by watching them in action, Kolb found that the dealmaking model applied to the way many individual state mediators handled their cases across the board, and as the best way to describe state mediators as a group.

Orchestrating. In contrast to dealmaking, Kolb (1983) also proposed a model for mediation that places heavier emphasis on the process, leaving the resolution of substantive issues more under the disputants' control. In 'orchestrating' mediation, parties continue negotiations but use a new forum created by the mediator. The mediator works to 'develop a dialogue' and encourages direct communication and joint meetings. The role evolves from 'dumb questioner' to 'gatekeeper'. In Kolb's research, this model was validated by federal mediators' behavior and their responses to interviews about their style.

Discussion. Both of these models derive from Kolb's field studies of nine mediators in 16 cases. The traditional view of mediation has emphasized process work — orchestrating — yet Kolb found evidence for the dealmaking model, exemplifying a more aggressive style. Other researchers have not only observed 'aggressiveness' (Kochan and Jick, 1978) and 'high intensity' (Gerhart and Drotning, 1980) in mediators but found these behaviors to be more successful than passive, low-intensity mediation in obtaining settlements. The variety and number of entries in inventories of mediators' tactics suggest that even more descriptive models of mediation are possible; indeed, Silbey and Merry (1986) have recently found additional styles. But it would also be interesting to see whether the two models above apply to mediation outside of collective bargaining.

Normative models of mediation

In addition to the descriptive models above, researchers and practitioners have developed a number of normative models of mediation. Early versions were based on mediation in labor disputes, but models have now been developed for a variety of complex conflicts. Some examples appear below.

General guide. In perhaps the earliest modern treatise on the subject, Jackson (1952) described and compared the uses of mediation in U.S. and European labor disputes and in political disputes in the United Nations in order to distill common principles. From them, he set forth a normative model of mediation consisting of five sequentially applied 'techniques' (his word): (a) getting the parties together; (b) building up confidence in the mediator; (c) 'deflating' facts to their true proportions; (d) raising doubts among the parties as to the positions they have

assumed; and (e) generating alternative solutions and expanding areas of agreement. Jackson also discussed the importance of timing, the use of cooling-off periods, and ways of dealing with the public.

Mediation tactics and contract zone. Stevens (1963) developed a somewhat more formal model. He postulated that mediators base their strategies and tactics on their assessment of the status of disputants' negotiations at the time of intervention. One of three assessments is possible: (a) the parties never identified a 'contract zone' or domain in which agreement was possible, (b) the parties identified a contract zone, but it disappeared as each tried to intimidate the other, with threats and commitments, and (c) the parties identified a contract zone but cannot decide among the alternatives within it. Using collective bargaining as his context, Stevens proposed that, in the first case, the mediator should create a contract zone; in the second case, the mediator should help the parties to save face (gracefully bowing out of commitments and threats) and to recreate the contract zone; and in the third case, the mediator should assist the parties to weigh and to rank existing alternatives and create a truly integrative strategy.

Megaprocess. In a considerable expansion beyond the two preceding models, Folberg and Taylor (1984) have presented a seven-stage 'megaprocess' model of mediation. These stages are introduction (creating trust and structure); fact-finding and isolation of issues; creation of options and alternatives, negotiation and decision-making; clarification and writing a plan; legal review and processing; and implementation, review and revision. The two researchers devoted some attention to specific ways to execute this process, but they primarily concentrated on comparing the various contexts in which mediation has been successful.

Twelve stages. A more comprehensive 12-stage model has been proposed by Moore (1986). According to this model, five stages should occur before the mediator even brings the parties together: making initial contact, selecting a strategy, collecting and analyzing background information, preparing a detailed plan, and building trust and cooperation. The mediation process itself takes place in stages 6–12: beginning the session, defining issues and setting an agenda, uncovering hidden interests of disputants, generating options for settlement, assessing options, final bargaining, and confirming the final agreement.

Moore recommended that, at each stage, the mediator design hypotheses and appropriate strategies for executing that stage. Those plans and actions should take into account the level of conflict development, the complexity of the issues in dispute, timing of the intervention, the parties' capability to resolve their own dispute, the nature of the power balance between the disputants, the types of negotiation approaches used by the parties (e.g. distributive, or integrative), and the role and tasks of the mediator. Moore cited much of the available research that supports the importance and contribution of these strategic factors as well as the ways to develop contingency strategies for special situations.

(Mediator) strategic choice. A number of 'partial' models of mediation are now evolving, particularly in specifying the appropriate strategy and tactics for particular disputes. One of particular note has been proposed by Carnevale (1986a,b). Carnevale argues that a mediator chooses a strategy based on the amount of common ground that he or she perceives for the disputants and on the value he or she places on the disputants achieving their aspirations. The mediator

has four possible strategies that should be selected, as follows: (a) 'pressing' the parties to be less rigid (low common ground, low mediator value); (b) compensating them for making concessions (low, high); (c) remaining inactive (high, low); and (d) proposing integrative agreements (high, high). In Carnevale's view, this model applies to changes in a mediator's behavior during a single negotiation session as well as to a mediator's choice of a strategy. While Carnevale has intended this model to be prescriptive, his work builds on earlier contingency-based models of mediator strategy (e.g. Haynes, 1985; Shapiro, Drieghe and Brett, 1985; Wall and Rude, 1985), and experimental research on this model is just getting underway (Carnevale, Conlon, Hanisch and Harris, *in press*).

Discussion. The number of normative models described here demonstrates the widespread interest of researchers in mediation. Indeed, among the various third party processes, mediation seems to have drawn the most attention from researchers (Kressel and Pruitt, 1985; Rubin, 1980). The normative side of this interest also coincides with the values underlying normative models of conflict and of negotiation, since mediation, as opposed to other third party processes, still allows for self-determination and cooperation between the disputants. As Sheppard (1983) has written, disputes resolved by mediation should lead to high degrees of perceived fairness and satisfaction of the disputants.

As is also true in previous sections, however, the empirical bases for and the validation of these models are unclear and even weak. Some research has been done on the key attributes of successful mediators (e.g. Landsberger, 1960), but it does not appear to have been used directly for the four normative models above. Contingency-based models such as Carnevale's do much to advance research on mediation and to move it beyond the extensive inventories of mediator strategies and tactics undertaken in previous studies (Carnevale and Pegnetter, 1985; Kochan and Jick, 1978; Kressel, 1972; Shapiro *et al.*, 1985; Wall, 1981; Wall and Rude, 1985). Nevertheless, this model and the others listed in Table 3 have not settled three remaining controversies.

First, there is still no universally accepted or authoritative definition of mediation. Researchers appear to agree that a third party as mediator exerts control over the process of dispute resolution but not over the final outcome. However, more specific understandings differ considerably (Brett and Goldberg, 1983b; Brett, Goldberg and Ury, 1980; Kolb, 1983, 1986; Kolb and Sheppard, 1985). For that reason, several authors (e.g. Rubin, 1983) have called for an 'intervention esperanto', a common language to describe a third party and his or her actions.

That leads to a second controversy, namely, what behaviors or actions fall within the definition of mediation? Although the answer should essentially be empirical, research efforts have been confounded by the definitional problem. Investigators who see mediation strictly as a process function have set aside studies of 'aggressive' (Kochan and Jick, 1978), 'high-intensity' (Gerhart and Drotning, 1980) and 'dealmaking' (Kolb, 1981) mediators on the grounds that such behavior entails more than process control. That is, these third parties exceed mediation proper by exerting heavy influence on the outcome and even by removing the disputants' choice about settlement. The predisposition to view and interpret mediation as only process control may again reflect the collaborative, problem-solving bias of social science researchers (assumption 6).

Finally, model-builders and other researchers in this area have begun to grapple with the influence of social context on a mediator's strategy and tactics (Kolb, 1986; Rubin, 1981, 1986; Sheppard *et al.*, 1987). Organizational contexts have been compared to communities and families (recall assumption 9). This issue, like the one before it, should be moved beyond the realm of mere debate to careful empirical study.

Arbitration

In contrast to mediators, arbitrators control the outcome rather than the process of dispute resolution. Parties present their sides of a conflict to an arbitrator in whatever form and manner they please (except as sometimes regulated by precedent or legislation); the arbitrator simply tries to ensure that both sides have an equal and reasonable opportunity to present their arguments. In the end, however, it is the arbitrator who decides the outcome. This process has been commonly used in public sector labor relations to resolve negotiating impasses (Lewin *et al.*, 1988) and workplace grievances (Ichniowski and Lewin, 1987), and is being used with increasing frequency as an alternative to formal legal proceedings to resolve liability claims, insurance settlements, and regulatory compliance disputes.

Descriptive-normative models of arbitration

Models of arbitration in the existing literature present more classification problems than the models hitherto described because they are commonly presented as formats or procedures that disputants and arbitrators have traditionally followed and that parties who engage in the process should continue to follow. In short, these arbitration models are designed to be both descriptive and normative.

Conventional procedures and techniques. In 1960, Elkouri and Elkouri wrote the first edition of a now-classic manual of the ‘workings of labor–management arbitration’, a book intended to present a realistic picture of how arbitration works while also advising arbitrators how to perform. One section sets forth the arbitration process step by step. The sequence generally includes: stating the issue, preparations for the hearing, presenting the case (including opening statements, examination of witnesses, and closing arguments), and receiving the arbitrator’s award and opinion. As to the behavior of the arbitrator during the hearing, the two authors have written: ‘... he must be free to ask questions and to explore all angles which he deems necessary to a full understanding of the case, “even if they have not occurred to either one or both of the parties”’ (Elkouri and Elkouri, 1985, pp. 222–223). In such ‘conventional’ arbitration (Feuille, 1979), the arbitrator need not limit the content of the award to the final position of one party or the other.

The broad lines of this model — and the many fine points that go along with them — follow from award precedents set by a large body of arbitration cases. The procedures for hearings are fairly straightforward; with regard to outcomes, Elkouri and Elkouri based their descriptions and recommendations on extensive examination of previous award trends and patterns.

Final offer. Although the general process described above applies to nearly all arbitration, there is a second model called final offer or ‘last-offer best-offer’ arbitration. In this model, the behavior of the parties and the basis of the arbitrator’s award both differ from conventional arbitration in that the arbitrator must decide a case by selecting the last offer proposed by one disputant or the other (Feuille, 1979). The arbitrator cannot invent a solution or split the difference.

The Final Offer Arbitration (FOA) model actually owes its creation to research on a problem with conventional arbitration called the ‘chilling effect’. Because disputants believe that many conventional arbitrators simply split the difference between disputants’ positions, they tend not to make concessions and may even exaggerate their positions in order to offset the impact of the arbitrator’s ‘split the difference’ decision (Farber and Katz, 1979). Lewin *et al.* (1988), among others, have explored these effects in the area of public sector labor disputes.

Discussion. By its very design, the arbitration process constrains the behavior of disputants and the arbitrator more than any of the other processes described thus far. Indeed, there appears to be little research on disputant behavior during arbitration hearings. At the same time, the two models above are not testable: The process described by Elkouri and Elkouri is to general, and only the premise of Final Offer Arbitration can be investigated empirically.

Instead, the literature on arbitration has branched out to explore new formats, the attitudes of disputants toward the process, and its linkage to and effects on bargaining. The new formats have included multiple versus single arbitrators, binding versus nonbinding decisions, and final offers by issue versus final offers by total package (Delaney and Feuille, 1984; Feuille, 1979). Researchers have also written about the overdependency of disputants on arbitration when it is available (the 'narcotic effect'), although several studies tend to refute any such effect in the long run (Chelius and Extejt, 1985; Lester, 1984); the drop in the effectiveness of arbitration when repeatedly used (the 'half-life effect'); and its loss of impartiality in disputants' eyes when an arbitrator consistently renders multiple decisions in favor of one party (Kochan, 1980; Lewicki and Litterer, 1985). With respect to arbitration and bargaining, the availability of arbitration appears to significantly dampen the tendency to strike (Anderson, 1981; Ponak and Wheeler, 1980). Compared to conventional arbitration, final offer arbitration favorably affects negotiators' aspiration levels, induces more compromise, and creates greater negotiator commitment to the settlement than does conventional arbitration (e.g. Neale and Bazerman, 1983; Notz, Starke and Atwell, 1983; Starke and Notz, 1981).

These studies notwithstanding, we could still learn more about the behavior of disputants in conventional and final offer arbitration hearings, and about arbitration concerning interests (basic terms and conditions of the disputants' relationship) as opposed to rights (challenges to existing agreements and customary practices) (Prassow and Peters, 1983). Of even greater interest would be the conduct and decision-making patterns of arbitrators in these different settings.

Other third party processes

Finally, in this last subsection, we address three third party models distinct from mediation and arbitration. The first model is descriptive, the remaining two are normative.

Descriptive models of other processes

Inquisition. According to Sheppard (1983), an inquisitor maintains a high degree of control over both the process and the outcome of a conflict. An inquisitor selects the approach to be used by the parties to resolve the dispute, actively controls the information available to both sides, decides the outcome and enforces it with both sides. Inquisitors tend not to diagnose a conflict in depth and hence are prone to 'snap judgments'.

Discussion. Remarkably little research has been done on this form of dispute resolution (*cf.* Sheppard, 1982; Sheppard and Vidmar, 1982). At the margin, however, arbitrators who exert some control over the discovery process may be described as inquisitors, as may mediators whose tactics pressure the parties toward a predesignated solution. Research from these domains, therefore, could be called upon to understand inquisitors and their effectiveness.

Normative models of other processes

Process consultation. Walton (1969) and Schein (1969) have proposed models of third party

resolution of interpersonal and intergroup disputes based on a human relations/humanistic psychology approach to conflict. This intervention combines elements of mediation with the third party's engineering of a direct confrontation between the parties, all designed to facilitate problem-solving behavior. Specifically, Walton's model comprises preliminary interviewing, structuring the confrontation, facilitating dialogue between the parties, encouraging problem-solving and planning for the future.

Problem-solving workshops. In the 1960's, other researcher/practitioners also espoused the process consultation approach by developing 'problem-solving workshops', prenegotiation experiences intended to enhance disputants' subsequent use of negotiation and to simply improve their relationship. In the first work published on these workshops, Burton (1969) asserted that perceptions of conflict are intensely subjective and alterable phenomena. He set out to induce changes in these perceptions — specifically, to encourage disputants to see conflict as a problem to solve rather than a contest to win. Burton held his workshops on university campuses, away from disputants' normal places of work, and he controlled communication between the disputants via third party academics. The five-day format consisted of: (a) introductions of participants; (b) statements from respective points of view; (c) an analytical discussion of the issues guided by academics' introductions of concepts, theories, and research findings; (d) establishing a shared language and common perceptions; and (e) trying to consolidate understandings and seek grounds of agreement.

Similar models and experiences with workshops have been reported in efforts to work on the problems of racial tension in Rhodesia (Burton, 1969); a border dispute in East Africa (Doob, 1970); religious conflict in Northern Ireland (Alevy, Bunker, Doob, Foltz, French, Klein and Miller, 1974); Arab-Israeli relations (Kelman, 1976; Cohen *et al.*, 1977); and community and organizational disputes (Fisher, 1983).

Discussion. Of the two normative models above, Walton's seems to have drawn far less research attention. The main support for his approach comes from illustrations of its use in three one-to-one (interpersonal) conflicts (Walton, 1969).

Problem-solving workshops, on the other hand, have been implemented and criticized by many others besides the three main developers (Burton, Doob, and Kelman). Early on, Kelman (1972) argued that a trade-off existed between the amount of change experienced by an individual in a workshop and one's ability to transfer that change and maintain it in one's usual place of work. Other academics claimed that conflict is basically objective, not subjective (Cot, 1972), and that the workshop does not lend itself to all types of conflict (Nader, 1972). The Northern Ireland workshop was the subject of a stinging critique, citing it for goals that were unsubstantiated both theoretically and practically, a haphazard research methodology, serious errors of judgment in the political and ethical propriety of the workshop, and a 'mandarin' attitude that encouraged intervention into the lives of ordinary people without either sufficient theory or regard for human cost (Boehringer, Zeruolis, Bayley and Boehringer, 1974). Participants have also voiced disillusionment about the workshop experience (Doob, 1974). Beyond these assertions and counterassertions and selective reports, however, there appear to be no systematic evaluations of the effectiveness of these workshops (for a good start, see Hill, 1982).

Summary for third party models

In this third and last section, we considered several models of third party processes. Thibaut and Walker's (1975) Process/Decision Control and Sheppard's (1984) Matrix Model were identi-

fied as leading paradigms. Discussion then turned to descriptive and normative models of mediation, mixed (descriptive–normative) models of arbitration, and models of inquisition, process consultation and problem-solving workshops. We cited related research as well.

As we have found in each of the two other areas of model-building and research, descriptive and normative works on third party processes have developed separately and remained apart. Direct connections have not been made. Further, there appear to be two strong, implicit assumptions in much of the third party literature.

Assumptions

A18. It is not useful to generalize from one kind of third party behavior (e.g. mediation) to another kind of third party behavior (e.g. arbitration). In contrast to the tendency to generalize conflict and negotiation research studies across actors, issues and contexts (assumption 9), there has not been an historical tendency to liberally generalize among third party styles. For most of its evolution, research in mediation, arbitration and process consultation treated the styles as separate and entirely distinct. However, the Thibaut and Walker and Sheppard models provide frameworks for making such comparisons, as do new and finely differentiated interventions such as med-arb (the third party serves as a mediator and then, if unsuccessful, takes the position of an arbitrator), ombudsman, fact-finding, good offices, conciliation and mini-trials. Yet there are some very strong differences between certain styles (e.g. mediation and inquisition). Closer attention must be paid to the delineating characteristics in the Thibaut and Walker and Sheppard frameworks to deter researchers from freely resorting to undisciplined cross-comparisons.

A19. The formal description of a third party (e.g. mediator) is a strong predictor of that party's actual behavior. The definitional problem noted earlier in the discussion of mediation applies more generally to a variety of third party styles: researchers have only recently come to discover that classical definitions of third party roles do not necessarily match observed behavior. Perhaps this is because empirical research has been so long in coming to this area. Researchers such as Kolb (1983, 1986) have identified mediation styles substantially different from the traditional characterizations; similarly, Sheppard (1983, 1984) identified the inquisitorial style, common in practice but 'unidentified' in research because of a lack of interest in it. These descriptive studies will facilitate creation of an array of patterns of third party behavior; agreement as to the labels to be placed on different patterns will be much more difficult.

Existing models and research in this area have carried previously cited assumptions as well. Models of dealmaking mediators and inquisitors do not address the causes and dynamics of the dispute (assumption 7), although some normative third party models (e.g. Moore's Twelve Stages and Problem-Solving Workshops) do incorporate them. A third party usually enters a preexisting dispute and that entry visibly marks a new stage of the dispute or creates what appears to be a new dispute altogether, but that does not seem to justify neglecting the preexisting dispute.

Much of the research to date has profiled the strategy and tactics of various third party roles and has tested whether a given profile fits a role label. Recently, investigators have begun to look at how a third party perceives and 'enacts' a particular conflict (Kolb, 1983; Weick, 1969) and selects strategy and tactics based on that enactment. Sheppard *et al.* (1987) have proposed that third parties 'frame', or evaluate, conflicts differently, and those frames greatly affect assumptions about the nature of the dispute and the appropriate strategy for its resolution. This direction of research has the potential to contribute greatly to third party literature.

Conclusions

In this section, we shall summarize our review and draw conclusions and implications from it. We shall first make a number of general statements about all of the models we have reviewed in this paper, and then focus our attention more specifically on directions for future research.

At the beginning of this review, we identified six approaches to conflict, negotiation and dispute resolution research: 'micro'-level, psychological, 'macro'-level, sociological, economic/game theoretic, labor relations, bargaining and negotiation and third party dispute resolution. These approaches differ in many ways, including the discipline base from which they draw, level of analysis of the causal factors, dynamics and outcomes of conflict, and the ease with which they may be applied to specific managerial problems. Moreover, the domains of the groups overlap to some degree, making our assignment of models to groups a somewhat arbitrary process. We chose to review models from the 'micro', bargaining and negotiation models and third party dispute resolution approaches because we believed they offered the strongest conceptual base from which to identify current progress and future needs. On the basis of this review, we offer the following conclusions.

1. For the most part, models are either descriptive or normative in design; they do not combine the two

The first major characteristic of the models reviewed here is that they have either been primarily descriptive or normative. Descriptive models have usually proceeded from discipline-based assumptions about causes, dynamics and processes. In contrast, normative models have usually been built from observations of practitioners in action, and are designed to enhance the quality of dispute resolution practice. Two key assumptions (5 and 6) have tended to drive these normative models: that conflict management or conflict reduction/resolution is the desired goal, and that collaboration (a win/win approach to conflict management/reduction) is the most desirable alternative among strategic options.

We believe it significant that most of the models have taken a distinctively descriptive or normative orientation. Descriptive models have tended to build 'down' from theories of human behavior, while normative models have tended to build 'up' from the direct experience of practitioners. What has been conspicuous in their absence is 'combined' models that have a solid empirical/conceptual footing in theory and empirical research but which can be extended to provide concrete prescriptions for managers. In spite of the caveat by Kurt Lewin that 'there is nothing so practical as a good theory', theory and practice in conflict management, negotiation and third party dispute resolution have generally remained conceptually autonomous arenas with little comprehensive effort at bridge-building and integration. Recent trends in some of the areas (e.g. Pruitt's research in negotiation or Sheppard's work in third party dispute resolution) are recent exceptions to this general trend.

2. A number of strong assumptions underlie these models

Our initial intent was to review and aggregate models of conflict, negotiation and conflict resolution. In developing a classification scheme for these models, we initially turned to the descriptive/normative distinction, but then recognized that a number of other assumptions about conflict and its resolution could best account for trends in both research and practice. These 19 assumptions are presented in Table 4. These assumptions have been very powerful underlying

forces in steering both research and practice. We believe that surfacing these assumptions has helped us to understand the positive and negative biases of those who study and write about conflict, and why research in these fields has or has not proceeded into certain topics and domains. Surfacing these assumptions also permits direct testing of them (where possible), and identification of neglected areas of research, a point to which we shall return.

Table 4. Assumptions underlying models of conflict, negotiation and third party behavior

A1.	Conflict originates from a variety of possible sources
A2.	Conflict follows a predictable course or pattern
A3.	Conflict is manifested in many ways, which have positive and negative consequences
A4.	Conflict and conflict handling behavior is adaptive
A5.	Conflict is to be managed with respect to its consequences (rather than its causes)
A6.	Collaborative behavior is strongly desirable as a way to manage and resolve conflict
A7.	The dynamics of conflict can be (and should be) analyzed apart from the dynamics of its resolution
A8.	Interpersonal and small group processes may be examined apart from environmental and societal variables
A9.	Lessons from particular models of conflict dynamics and conflict resolution can be readily generalized across various actors, issues and settings
A9a.	The dynamics of negotiations between two individuals adequately represent negotiations between two groups or organizations
A9b.	Generalizations about bilateral negotiations extend to multilateral negotiations
A9c.	Research findings derived from single issue negotiations in simple game-like experiments can be generalized to complex multi-issue negotiations in real-life settings
A10.	Negotiators are economically rational and seek to maximize economics outcome
A11.	Any negotiation situation, taken as a whole, is either purely zero-sum or purely non-zero-sum
A11a.	An entire negotiation can be described and explained by either a distributive model or an integrative one
A12.	There is a definitive way to negotiate well
A13.	All types of problems are negotiable
A14.	All parties want to negotiate and are able to negotiate
A15.	The essential part of negotiation takes place at the negotiation table
A16.	Third parties are motivated solely by the desire to resolve disputes effectively
A17.	A conflict should be resolved, not allowed simply to run its course
A18.	It is not useful to generalize from one kind of third party behavior (e.g. mediation) to another kind of third party behavior (e.g. arbitration)
A19.	The formal role description of a third party (e.g. mediator) is a strong predictor of that party's actual behavior.

3. Certain models have risen to the status of dominant paradigms

Within each area, we identified one or two models which have been cited with such regularity and consistency that they deserve the recognition as the dominant paradigm: Pondy's (1967) model of organizational conflict, Walton and McKersie's (1965) distributive and integrative subprocesses, and the third party taxonomies of Thibaut and Walker (1975) and Sheppard (1984). The Walton and McKersie paradigm has by far received the greatest common acknowledgment across disciplines; the conflict models have frequently (but not always) focused on Pondy, and much research in third party behavior (particularly outside labor relations) is so new that it is difficult to gain perspective. This review should stimulate discussion of the validity of these models as dominant paradigms, and/or lead to their evolution and refinement.

4. Model creation and 'frontier' claiming have received considerably more attention than model testing and synthesis

There is no shortage of models. Both normative and descriptive models have proliferated, often with little attention to earlier work. It has been distinctly more common for contemporary researchers to propose a new model than to integrate, synthesize or build upon previous models. In this review, we identified 44 distinct models; a number of others were neglected or not mentioned. One purpose has been to aggregate and organize these models into a coherent framework such that future model development and synthesis can occur in a more disciplined and systematic manner.

In addition to the tendency toward model proliferation, there has been a failure of researchers to test models empirically. The pattern in research development within each of the areas reviewed has been to either propose a general model or to conduct one or more empirical studies that manipulate several selected variables. More recently, there is also a tendency to use these models — more particularly the 'partial' models — as the organizing framework for a number of limited-variable empirical studies to affirm, in the research aggregate, conclusions which have not been derived from direct model testing. Yet many of the most popular and commonly acknowledged models — again, the conflict models — have received little or no direct research validation or challenge. Rather, they seem to work their way into 'accepted' or 'unaccepted' status without any thorough or systematic testing.

There may be multiple reasons for this trend. First, many of the models may not be directly testable; they were developed to explain behavior rather than predict it. Second, many of the models have been simple models, although some are more complex with several key causal and contextual variables; while research has focused on testing selected variables to achieve methodological precision, aggregate and comprehensive model testing has usually not occurred. Third, model development has typically proceeded within the boundaries of a particular discipline or practitioner orientation; as a result, many are discipline-bond and have developed in isolation from comparable studies in related disciplines. Even when cross-disciplinary sharing has occurred, it has had little real effect on model development and refinement.

Given these trends and the status of research in each of these fields, our review leads us to the following recommendations.

1. There is a need to continue the efforts begun here: to address the status of models in each area, to identify areas where research support is available or not available, and to encourage research efforts to test models directly

There is a strong need to build on the foundation of this review. In most cases, we have given only summary descriptions of the models, and not attempted a comprehensive literature review of research in any area. Subsequent efforts should attempt to evaluate the status of each of these models via reviews of existing empirical research, or directly test their premises and assumptions through new studies. Detailed examination of models will also surface additional assumptions and permit testing of particular competing hypotheses. These efforts should proceed in a systematic and disciplined manner.

2. There is a need for better cross-fertilization and integration of normative and descriptive models

In general, advocates of both approaches have tended to ignore the other. Many theoreticians developed their models without attention to the implications for practice. Conversely, those

working closely with practitioners have tended to articulate a few managerial principles or a very simplified model that does not lend itself to rigorous examination and testing. Each group has tended to view the other with disdain, thereby insuring the failure to seriously evaluate and learn from the others' work. Teams of researchers who are comfortable with both research and practice should attempt to strengthen the dialogue and integration between these groups and their approaches (Lewin and Feuille, 1983; Weiss-Wik, 1983).

3. Particularly among the conflict and negotiation models, there is a strong need to develop models that are not biased toward cooperation and win-win

The need for this movement is clear, not only because of the value bias toward cooperation but also because most actual negotiations occur in complex environments where unidimensional normative strategies are far too simplistic. Movement away from this value bias should occur in a two-step process. First, the research literature on 'contingency strategies' (e.g. Thomas (1976) in the conflict area, or Lax and Sebenius (1986) and Lewicki and Litterer (1985) in the negotiation area) should be comprehensively reviewed to specify the key contingency factors. For example, research and advocacy in the conflict area have seldom examined the conditions under which the absence of conflict is a problem (e.g. Janis, 1972) or ways to create productive conflict without also incurring its destructive derivatives. Similarly, research in negotiation has seldom specified the conditions under which noncooperative strategies are effective and might even be preferred.

Surfacing the key contingency factors and testing their impact through empirical research will also permit the development of more 'mid-range' theory (Merton, 1968). Particularly when models are broad and general while empirical research is focused and narrow, greater attention needs to be given to bridging the gap between these domains. A number of middle-range models have been developed in the negotiation field as a bridge between 'macro' models and 'micro' studies (e.g. threat and commitment strategies, Milburn and Watman (1981); toughness, Bartos (1970); power use, Raven and Kruglanski (1970) or Tedeschi and Bonoma (1977); lying and truth telling, Lewicki (1983)) or as a bridge between theory and practice (e.g. Weiss-Wik, 1983). Similar models are beginning to emerge in the third party area (e.g. Carnevale, 1986a). A great deal of additional work is needed at this level in all three areas.

4. There is a need for more cross-disciplinary sharing of models and research findings

The proliferation of models along disciplinary lines, without interdisciplinary cross-fertilization of assumptions, paradigms and research findings, has seriously fragmented the study of conflict, negotiation and dispute resolution. Yet we have consistently stressed that some of the richest insights can be derived by comparing and contrasting models and studies derived in one discipline to those obtained in another. The value derived from this activity comes not only from surfacing differences in the cultures and contexts in which key actors perform, but also in articulating the primary paradigmatic frames being used by theorists and model builders. Thus, for example, enhanced understanding of the behavior of a mediator comes not only from studying mediation-like behavior in labor relations, divorce and community disputes, but by evaluating the perspectives assumed by anthropologists, social psychologists or sociologists in studying the phenomena. Progress on this front is being made. Cross-disciplinary symposia, forums and professional associations are emerging in selected areas such as mediation, third party behavior, negotiation

in organizations and justice; their objectives are specifically to nurture improved research and practice across disciplinary and contextual boundaries.

This review considered aggregate models in three major research areas: conflict, negotiation and third party behavior. We have found a great deal of progress, although much remains to be done. This review should serve as a plateau from which more sophisticated assumption-testing, model building and practice can proceed.

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