Conditions Facilitating Interorganizational Collaboration

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There is a growing need to promote collaborative problem solving across various sectors of society, e.g., among business, government, labor, and communities. Organizing such collaborative efforts requires focusing on the interorganizational domain or set of interdependencies which link various stakeholders rather than on the actions of any single organization. Moreover, effective collaboration at the domain level is predicated on several preconditions. This paper synthesizes research findings from organization theory, policy analysis, and organization development, and proposes conditions that are essential to achieving collaboration during each of three successive phases of the process. Designing optimum conditions for collaboration depends on the presence and strength of these factors at appropriate points during the collaborative process.

INTRODUCTION

There is a growing need to promote collaborative problem solving among public and private sector organizations. Calls for collaboration between business, labor, and government have been made repeatedly in the popular and business press (see Business Week, 1980; Reich, 1981; Scobel, 1982; Heenan, 1982). Examples of collaborative ventures are increasingly evident (Business Week, 1983, Murray & Curran, 1982; Page, 1983; Bacow & Cohen, 1982; Taber, Walsh, & Cooke, 1979). A case in point is the recent accord reached between environmental groups and the chemical industry on acceptable concentrations of toxic PCBs used in manufacturing (Peterson,

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1983). Probably the most dramatic appeal for collaboration has been made by Theodore Sorenson. Sorenson's (1984) proposal for a coalition government in the White House stems from his belief that as a society we are facing a series of crises which can only be addressed by putting aside party differences.

During crises, the likelihood of collaboration increases. Justification for collaboration, however, is not only based on solving crises. Several other circumstances have been identified in which collaborative problem solving among stakeholders is warranted: (1) the existence of what Aldrich (1976) calls "indivisible" problems, i.e., problems which are bigger than any single organization acting alone can solve, (2) limitations of traditional adversarial methods of resolving conflicts, and (3) increasing environmental turbulence. Turbulence occurs when large, competing organizations, acting independently in diverse directions, create unanticipated and dissonant consequences for themselves and others (Emery & Trist, 1965; Trist, 1977). The ability of single, bureaucratic organizations to plan in the face of turbulence is greatly reduced. In all three circumstances above, collaboration offers a viable alternative to existing decision processes. By collaboration we mean: (1) the pooling of appreciations and/or tangible resources, e.g., information, money, labor, etc., (2) by two or more stakeholders, (3) to solve a set of problems which neither can solve individually. Moreover, our focus is on collaboration within interorganizational domains (as opposed to collaboration within single organizations).

It should be noted here that our focus on collaboration within domains differs from the other perspectives on interorganizational relations in four distinct ways. First, we focus on domain level development. The level of analysis is the relationships within an interorganizational system, rather than a focal organization. Therefore, it is distinct from the organization set perspective (Evan, 1966; Freeman, 1984).

Trist (1983) defined problem domains as "functional social systems which occupy a position in social space between the society as a whole and the single organization." More simply, domains can be thought of as the set of actors (individuals, groups, and/or organizations) that become joined by a common problem or interest. One example of a domain is the set of actors concerned about disposal of toxic wastes in the Northeastern states. Another is composed of several rehabilitation organizations serving northern Minnesota (Gray & McCann, 1985). Each of these problems involves many organizational and/or individual actors and cuts across traditional organizational boundaries. We argue that a domain level focus is essential both for understanding and for solving such problems.

Second, we are concerned with underorganized systems (Brown, 1980; Gricar & Brown, 1981). That is, the domains of interest represent potential

networks of organizations rather than already established networks or federations of organizations. We are interested in the conditions under which these domains become organized into networks or other collaborative structures.

Third, we are concerned with problem domains which cannot be satisfactorily managed by a single organization or by an oligopoly. These problem domains require the resources of several stakeholders, i.e., those individuals, groups, and organizations who are directly influenced by the actions of others within the domain) to achieve constructive resolution of the problem. As a corollary, we are concerned with the evolution of collaborative relationships which can advance the interests of all stakeholders.

Finally, we adopt a process-oriented, rather than a cross-sectional approach. We are concerned with the need for and development of collaborative relationships within organizational domains, rather than with the role established domains play in controlling the behavior of individual organizations (Pfeffer & Salancik, 1978). Rogers and Whetten (1982) have criticized research on interorganizational relations because it focuses almost entirely on formal, highly quantifiable types of transactions, is ahistorical, lacks a system's orientation, is insensitive to multiple outcomes and power distributions, is cross-sectional, and is oriented toward individual actors at the expense of larger system dynamics. In this paper, we attempt to overcome these criticisms by developing a domain-based, process-oriented model of interorganizational relations. Our model synthesizes findings from organization theory, policy analysis, and organization theory.

The paper is organized as follows. Initially, we take a closer look at why domain level collaboration is an appropriate alternative to more traditional models of organizing and conceptualizing interorganizational relationships. Then we introduce a three-phase model of domain development. Building on the model, we identify conditions conducive to effective collaboration at each of the three phases. We conclude with a discussion of how a diagnosis of these conditions can inform practice.

THE NEED FOR DOMAIN-LEVEL COLLABORATION

Maladaptive Responses to Turbulent Environments

The nature of problems which confront both public and private sector organizations has been undergoing fundamental change (Schon, 1971; Ackoff, 1974, 1981; Rittel & Webber, 1973). Many problems exceed the capability of any single firm to control. Ackoff (1974) dubs them "messes." Aldrich (1976) refers to problems of this type as "indivisible." Rittle and Weber (1973)

describe them as "inherently wicked" and not governed by an internal stopping rule. The open ended, unstable nature of such problems has been characterized at some length by Schon (1971).

Organizations (and individuals) experience these problems as an increase in the number of external pressures which constrain their decision making. Bureaucratic organizations find their strategies increasingly dependent upon decisions taken by other organizations (Emery & Trist, 1965; O'Toole, 1979; Pfeffer & Salancik, 1978; Aldrich, 1976; Trist, 1977, 1983; Kast, 1980; Sonnenfeld, 1982). Accordingly, bureaucratic organizations have been criticized for their inability to adapt to the complex uncertainties confronting them (Williams, 1982; Ackoff, 1981; Beer, 1981). Attempts at adaptation result in severely constrained decisions and the inability to plan for future changes (Ackoff, 1974). The inability of the U.S. Steel industry to reckon with global competition exemplifies the limitations of bureaucratic organizations to adapt.

Attempts by individual organizations to manage turbulence are maladaptive at the domain level because they are uncoordinated and often create unanticipated problems for other stakeholders. Additionally, they are maladaptive because the competition for resources from the contextual environment allows some stakeholders to promote their values at the expense of others (Warren, 1967). However, this process of satisficing with respect to values is seldom optimal for the domain (Warren, 1967).

We argue that the inability of individual organizations to adapt is due in large part to a failure to conceptualize problems and organize solutions at the domain level. Managers and researchers have historically utilized an organization set framework with which to construct problems. The organization set perspective characterizes a single organization as "focal" among a set of relevant environmental pressures from other organizations (Evan, 1966). Theories of corporate social responsibility utilize the organization set perspective (Post, 1978; Freeman, 1984). They explain the firm in terms of its response to external constituenceis such as unions, consumers, and employees (Ansoff, 1965). Similarly, resource dependence theorists (Pfeffer & Salancik, 1978; Aldrich, 1976; Cooke, 1977) adopt that perspective by construing single firms as "maneuvering to maintain autonomy and manage power/dependence" (Cummings, 1984). It is understandable that managers would also naturally prefer this approach to problem solving since they envision that their primary domain of control ends at the boundary of their own firm; the organization set perspective permits managers to maintain a sense of control over their own firm's affairs. However, this level of conceptualizing problems and organizing responses is no longer adaptive when the environment becomes turbulent (Emery & Trist, 1965; Trist, 1976, 1983).

Limits to Adversarial Problem Solving

Historically in the U.S., we have favored adversarial methods of handling interorganizational disputes (Berle & Means, 1968; Galbraith, 1973). However, even these long-standing methods for handling interorganizational conflicts are being questioned. There is a growing recognition of the limitations of our adversarial approach to resolving civil disputes. For example, Reich (1981) has articulated the costs to industry and government of regulatory disputes. In addition to being extremely costly, civil litigation often fails to produce results acceptable to either party (Reich, 1981; Murray & Curran, 1982; Wessel, 1976; Gelhorn, 1984). For example, beliefs by both industrialists and environmentalists that they were losing in the courts led to the formation of the National Coal Policy Project (NCPP). The NCPP was a year-long forum in which coal producers, coal consumers, and environmental groups hammered out a consensus on coal policy for the U.S.[2] Dissatisfaction with legal remedies has spurred other attempts at nonadversarial problem solving also (see Blundell, 1982; Peterson, 1983; Quadrangle Notes, 1982). The search for alternatives to civil litigation is growing and domain level collaboration offers one viable alternative.

Domain Level Interdependence

Collaborative efforts presume that individual firms are one among many stakeholders whose activities are truly interdependent. With a domain focus, needs and interests are not defined in terms of a single organization but in terms of the interdependencies among the stake-holders who are affected by an issue and claim a right to influence its outcome (Trist, 1983).[3] Stakeholders in the domain concerned with the dumping of chemical wastes include the chemical companies, homeowners who must relocate, families who

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[2]For extensive discussion of this case see Gray and Hay (1986), Murray and Curran (1982), Murray (1979), and Fox (1982).

[3]Warren (1967) and Milward (1982) have used similar analytical levels referred to, respectively, as interorganizational fields and policy systems to understand relationships among public sector organizations. According to Milward, organizations within a policy system have a mutual interest in a certain class of policy although they do not necessarily share the same goals with respect to that policy. Warren proposes four contexts by which decisions are made within interorganizational fields: social choice, coalitional, federative, and unitary. These range from being characterized by totally autonomous to highly centralized decision-making among the organizations. Moving from a social choice to a coalitional context represents the beginning of collaboration as we refer to it in this paper.

have been exposed to health risks, and all those who must foot the bill for clean-up efforts. A domain focus is needed precisely because none of these stakeholders acting alone can solve the problem. Furthermore, purposeful actions by any stakeholder may profoundly influence the ability of the others to achieve their goals. Hence, they are interdependent on one another (although the degree to which stakeholders are conscious of this interdependence may vary considerably).

Collaboration has been proposed as the only viable response to this level of interdependence (Emery & Trist, 1965; Trist, 1983). Since each stakeholder can apprehend only a portion of the problem, by pooling perceptions, greater understanding of the context can be achieved. In this way, the process of appreciation or reality judgment (Vickers, 1965) is enriched and a negotiated order is created (O'Toole & O'Toole, 1981). Based on this negotiated order, the stakeholders can begin to coordinate their activities and manage the problem collectively rather than individually, a process referred to as self-regulation of the domain (Trist, 1983).

A PROCESS MODEL OF COLLABORATION

Phases

Research on collaboration which utilizes a process approach has almost exclusively consisted of interpretive case analyses (Gray & Hay, 1986; Gray & McCann, 1984; Gricar & Grown, 1981; Kaplan, 1980; Lawless, 1982; McCann, 1980; Taber et al., 1979; Trist, 1977). Building on the work of McCann (1983) we synthesize the results of these case studies into a model of conditions which lead to collaboration. McCann (1983) has observed that interorganizational domains develop through three sequential phases: problem-setting, direction-setting, and structuring. He suggests that progression through these phases is a natural process for a domain; but, as in any natural sequence, internal and external forces can interrupt, enhance, or impede the cycle. Our understanding of collaboration can be advanced, then, by understanding the developmental phases and by considering the conditions necessary to move through each developmental phase. Implicit in this discussion is the idea that domain level dynamics can be managed to improve the likelihood that collaborative relationships are achieved and sustained.

Problem-Setting. Problem-setting is concerned with identification of the stakeholders within a domain and mutual acknowledgment of the issue which joins them. "The primary objective of problem-setting is to give the situation an explicit form or identity that allows stakeholders to communicate about it and eventually act upon it" (McCann, 1983, p. 18). The impor-

tance of problem-setting should not be underestimated. Unless some consensus is reached about who has a legitimate stake in an issue and exactly what that joint issue is, further attempts at collaboration will be thwarted. Problem-setting may involve focusing the attention of existing members of the domain in a direction they have previously ignored. It is also a vehicle by which previously unrecognized stakeholders achieve recognition as legitimate claimants in the issue. Through the problem-setting process, then, stakeholders negotiate issues of legitimacy and come to appreciate the interdependence which exists among themselves. Collaboration is initiated through appreciation of the interdependence which exists and the need for joint "appreciation" among stakeholders of the nature and substance of their interdependence.

Direction-Setting. In the direction-setting phase, stakeholders articulate the values which guide their individual pursuits and begin to identify and appreciate a sense of common purpose. Direction-setting gives life to the stakeholders' hopes that their desired ends can, in fact, be achieved. One vehicle for direction-setting is the search conference in which participants engage in joint conceptualization of the desired future of the domain (Emery & Emery, 1978; Gilmore, Weiss, & Williams, 1979). This process of developing shared interpretations about the future of the domain and the articulation of commonly held values or goals serve to correlate the stakeholders' activities toward mutually desirable ends (Somerhoff, 1950; Burns, 1966; Churchman & Emery, 1966). The National Coal Policy Project provides a concrete example of direction-setting. The Project produced a list of over 200 policy recommendations to guide coal consumption, mining,and transportation for the 1980's (Murray, 1979). Hence, the Project established a clear direction for future coal policy to which all the stakeholders subscribed. Several of the recommendations were subsequently incorporated into regulatory policies.

Structuring. For persistent, complex problems like coal policy and others referred to earlier (Ackoff, 1974; Rittel & Weber, 1973; Schon, 1971) the need for ongoing appreciative processes becomes essential as does the need to manage stakeholder interactions in an increasingly systematic manner. Trist (1983) and Emery and Emery (1977) refer to this process as self-regulation of the domain. To the extent that stakeholders "regard each other as potential co-producers of desirable changes in their shared environments" (Williams, 1982, p. 12), they need to create long-term structures to support and sustain their collective appreciation and problem-solving activities. McCann (1983) refers to this third phase of collaboration as structuring. Collaboration will be enhanced when joint appreciation of the problem dynamics is shared by stakeholders and they undertake negotiations to create a mutually acceptable regulative framework for the domain.

Table I. Facilitative Conditions at Each Phase of Collaboration

Problem-setting	Direction-setting	Structuring
Recognition of interdependence	Coincidence of values	High degree of ongoing interdependence
Identification of a requisite number of stakeholders	Dispersion of power among stakeholders	External mandates
Perceptions of legitimacy among stakeholders		Redistribution of power
Legitimate/skilled convenor		Influencing the contextual environment
Positive beliefs about outcomes		
Shared access power		

Through structuring, stakeholders generate a system for sustaining coincident values and establishing order within the domain. Specific goals are set, tasks are elaborated, and roles are assigned to stakeholders. Trist (1983) labels the organizational arrangements that emerge referent structures. While the establishment of a formal structure is often thought of as occurring at a fixed point in time, we prefer to think of structuring as a developmental phase. Structuring refers to the process of institutionalizing the shared meanings and prevailing norms which emerge gradually as the domain develops (Ranson, Hinings, & Greenwood, 1980). Formalization of these during the structuring phase represents an explicit ratification of a previously loosely negotiated understanding.

Research suggests that different conditions facilitate successful collaboration during each developmental phase. Table 1 proposes the conditions which are significant at each phase. Each of these conditions is discussed in detail below.

Conditions which Facilitate Problem-Setting

Identification of the Stakeholders. A fundamental question in fostering collaboration among stakeholders within a domain is "who should participate?" For complex problems, multiple sources of information must be brought to bear to identify the problem and to search for a solution. The collection of stakeholders must include those whose expertise is essential to building a solution. A more comprehensive understanding of the problem is achieved as more stakeholders' share their various appreciations about the problem (Vickers, 1965). Ultimately, a sufficient variety of information is need-

ed from stakeholders to match the complexity inherent in the issue itself. Ashby (1960) refers to this as building in sufficient requisite variety. This variety strengthens the domain's capacity to learn about the continually changing patterns of interdependence among the stakeholders (Friend & Jessop, 1969). For example, it is unreasonable to expect the public sector and private citizens to clean up chemical dumps since the chemical companies have the most expertise about how to handle the toxic materials involved; yet, is is not desirable for chemical companies to act independently since information about the exact nature of the consequences resides with members of the community, including residents, medical professionals, regulatory agencies, etc. Moreover, acceptance of any solution is enhanced when those who must abide by it are included in designing the solution (Delbecq, 1974). Omission of relevant stakeholders invites political difficulties during subsequent implementation. Therefore, selection of stakeholders must be done with considerable care.

Initially, then, all of the stakeholders and their respective positions need to be identified. This is an effort to diagram the problem domain or set of interdependences so that all relevant viewpoints can be taken into account in problem solving. These ideas are summarized in Proposition 1 and Corollary 1A below.

> *Proposition 1.* The stakeholder set needs to reflect the complexity of the problem under consideration if collaboration is to occur.

> *Corollary 1A.* From an information standpoint, the more stakeholders who participate in problem solving, the more effective the collaboration will be.

Stakeholders may be well-defined and easily identifiable (as in a network of rehabilitation agencies representing each county within a state); or they may be relatively unknown as in the case of toxic wastes buried in Love Canal, New York. In that situation, neither victims nor the chemical companies who had utilized the dump were readily identifiable. In addition, all stakeholders may not be concerned with the problem simultaneously. Some may be unaware of the underlying interdependencies. Others may be indifferent. Still others may not be activated until solutions are proposed or until implementation is underway.[4] Hence, the configuration of stakeholders within

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[4]Milward (1982) distinguishes stakeholders according to the level of influence they have over the domain. For example, members of what he calls the "policy community" include all those interested in the benefits that may flow from a policy domain, whereas members of the "decision network" are capable of affecting the distribution of benefits. Notably, clients are not typically included in the definition of a policy community. In our domain model, clients are considered stakeholders although their legitimacy is often questioned by other stakeholders.

a domain is dynamic. The implications of this are reflected in Corollary 1B.

> *Corollary 1B.* Efforts to convene all stakeholders simultaneously will likely be thwarted by changing dynamics of the domain. Therefore, inclusion of stakeholders should be viewed as a process of continual adaptation.

Stakeholder's Expectations about Outcomes. Before stakeholders will seek to solve problems collaboratively, they must believe that collaboration will produce positive outcomes (Schermerhorn 1975). As Hay (1983) has pointed out, this implies a measure of dissatisfaction with the existing situation. Collaboration is infrequently not even considered until more traditional litigious approaches for handling the problems have been unsuccessful (Fox, 1982). Impasse forces reconsideration of the costs of collaborating.

> When the failure of contending parties to reach an agreement promises to cost one or more of the parties more than the costs of reaching agreement, the chances for a negotiated settlement are remarkably enhanced. The fate of a major project may well depend on the perceptions of such costs—and the confidence of the parties in the strength of their positions. With the waning of confidence comes increased incentive to bargain. (Bacow & Cohen, 1982, p. 44)

Participants in the National Coal Policy Project shared "a nearly unanimous dissatisfaction, often rising to the level of frustration, with the decisions rendered by the traditional system" (Murray & Curran, 1982, p. 27). Stakeholders from both sides regretted the protracted and costly legal battles which often produced outcomes unacceptable to either side. Because this mutual discontent was widely shared among stakeholders, the NCPP was able to convene. However, the discontent was not unanimous. Those environmental groups who continued to perceive themselves as victors in litigation, believed they had nothing to gain from collaborative efforts and refused to participate. Therefore, participation will only occur if key leaders of each group believe that the benefits of participating exceed the costs (Davidson, 1976; Schmidt & Kochan, 1977). These shared beliefs have been called "mutual positive motivation" (Walton, 1969). For example, with respect to a proposed forum on nuclear power, leaders of the antinuclear coalition were reluctant to divert resources to the forum and away from pursuit of legal action. They were concerned that the forum would drain already scarce resources and dilute their effectiveness in both settings. Hence, the costs did not outweigh the gains.

Perceptions of positive benefits can be increased when stakeholders come to appreciate the extent of their interdependence on each other. For some stakeholders, incentives may need to be provided to induce their participation. The incentives must be substantial enough to offset these stakeholders' perceptions that collaboration will threaten their access to scarce resources. One powerful source of incentives is cultural norms supporting

collaboration (Schermerhorn, 1975). For example, contrast the role collaboration plays in the cultures of Japan and Sweden with the prevailing preference in the U.S. for adversarial approaches to dispute resolution. It may not be mere coincidence that Minnesota (with its strong Scandanavian heritage) is tauted for the number of collaborative projects initiated by its state and local governments.

> *Proposition 2.* Problem-setting efforts are enhanced when stakeholders expect that the benefits of collaborating will outweigh the costs and when prevailing norms support collaboration. If positive expectations are not present, incentives to induce participation will be necessary.

Degree of Recognized Interdependence. The recognition by stakeholder groups that their actions are inextricably linked to the actions of other stakeholders is a critical basis for collaboration. Perceptions of positive benefits can be increased when stakeholders come to appreciate the extent of their interdependence on each other. Reviewing the research of others, Rogers and Whetten (1982, p. 57) report, "Terreberry (1968), Hooyman (1976), Akinbode and Clark (1976), and Davidson (1976) discovered that a necessary prerequisite, prior to formulating ways to coordinate, is that leaders must be aware of at least partial interdependence of their organizations." Appreciation of these interdependencies has already been identified as a key attribute of successful network convenors (Sarason & Lorentz, 1979). Without acknowledgment by the stakeholders that some fundamental interdependence exists, collaborative problem-solving efforts make no sense. Since stakeholders within a domain face the same set of uncertainties about the future (Williams, 1982), consideration of alternative scenarios of the future can increase awareness of interdependencies and shape common visions of expected and desired futures (Emery & Emery, 1978; Gilmore, Weiss, & Williams, 1979). Increased appreciation of joint interdependencies is also the aim of many conflict management strategies (Sherif, 1958; Miles, 1980; Brown, 1982). At least some minimum consensus about a superordinate goal (Sherif, 1958) is needed as a basis for convening the various stakeholders. Furthermore, mutual dependence ensures that the participating parties have some power vis-à-vis each other (Walton, 1969).

> *Proposition 3.* The greater the degree of recognized interdependence among stakeholders, the greater the likelihood of initiating collaboration.

Legitimacy of the Stakeholders. A critical consideration in identifying stakeholders is determining which ones have a legitimate stake in the problem (Walton, 1972; McCann, 1980; Gricar, 1981b). A legitimate stake means the perceived right and capacity to participate in the developmental process.

Those actors with a right to participate are those impacted by the actions of other stakeholders. They become involved in order to moderate those impacts. However, to be perceived as legitimate, stakeholders must also have the capacity to participate. That is, they must possess resources and skills sufficient to justify their involvement in collaborative efforts. Some stakeholders are perceived as legitimate because they have recognized expertise to bring to bear on the problem. Others control needed financial or informational resources. Still others wield the power to effectively veto any agreements reached either through direct action or by failing to carry out the agreements once they're negotiated.

Perceptions of legitimacy will be influenced by the distribution of power among the various stakeholders (Gray & McCann, 1984). Low-power stakeholders who are trying to achieve "voice" in the domain (Hirschman, 1970) may need to build their power base before they can gain legitimate status as a stakeholder (Gricar & Brown, 1981). For example, stakeholders may need to resort to advocacy tactics (Gricar & Brown, 1981; Boje, 1979) in order to gain access to domain level decision making (Schumaker, 1975). Coalition building is one example of these advocacy methods (Metcalfe, 1976).

Perceptions of legitimacy will undoubtedly be colored by historical relationships among the stakeholders. For example, government officials may not perceive citizens as having a "legitimate voice" in a technical issue even though the citizens will have to live with whatever solution is adopted. Questions of stakeholder legitimacy were paramount in an attempt to convene a community forum of stakeholders concerned about the operation of a nuclear power plant. Local elected officials and some federal regulatory staff were skeptical about the ability of stakeholders with extreme views to be "rational" and questioned the need to include citizens at all. Pro-nuclear proponents wanted assurance that the anti's would not stage protests during the forum and wondered if they could listen to and entertain perspectives on the subject which were antithetical to their own. The anti's, on the other hand, concerned that they would receive only token membership, wanted assurances that membership in the forum was balanced among pro- and anti-nuclear proponents (Gricar, 1981a).

Stakeholders often disagree about the legitimacy of other stakeholders, but initiating collaboration hinges upon achieving acceptance among stakeholders of each other's right to participate. Rogers and Whetten (1982, p. 62, citing White, 1968; Caroff, 1977; Schmidt & Kochan, 1977) point out that "if one organization interprets another as a threat, whether it be founded or unfounded, future attempts at coordination will generally fail." The formation of negative stereotypes not only inhibits collaboration, but also increases the difficulty of correcting those stereotypes because information flow is severely restricted (Schein, 1970). On the other hand, successful coor-

dination among social service agencies has been shown to depend on each agency legitimizing the goals and methods of the others (Levine & White, 1961). Similarly, stakeholders who have developed mutual positive assessment of each other experience enhanced coordination (Hall, Clark, Giordano, Johnson, & Van Rockel, 1977; Schermerhorn, 1975). Proposition 4 summarizes this discussion.

> *Proposition 4.* Shared perceptions of legitimacy are necessary to initiate problem-setting. Perceptions of legitimacy will be shaped by historical relations and by the existing power distribution among stakeholders.

The decision of whom to include, however, is often a paradoxical one which forces convenors to chose among competing benefits. For example, the convenors of the National Coal Policy Project limited the number of stakeholders in order to keep the project manageable. Their decision greatly enhanced administration of the Project but severely constrained the Project's success in implementing its recommendations (Gray & Hay, 1986). Acceptance of any solution is enhanced when those who must abide by it are included in designing the solution (Delbecq, 1974). Omission of legitimate stakeholders invites resistance during subsequent implementation. According to Fox (1982, p. 402), "Parties that are left out may disrupt the proceedings or ultimately challenge the outcome reached, while parties that stay out are implicitly challenging the effort as it begins." This idea is reflected as Corollary 4A below.

> *Corollary 4A.* Exclusion of legitimate stakeholders during problem setting will constrain subsequent implementation of solutions.

Convenor Characteristics. Who initiates collaborative problem solving has a critical impact on its success or failure. For some sets of organizations and some domains, a central umbrella organization may already exist which can serve as a convening authority for the domain (Friend & Jessop, 1969; Provan, 1983). This may be the node of an already existing network of organizations, e.g., a central funding agency on which others are mutually dependent (see Kaplan, 1980; McCann, 1980). In systems for which a natural authority exists for a domain, it may simply need to be pressed into service by appeal from one or more of the stakeholders (Friend & Jessop, 1969). This was the case when a municipal government convened a committee to resolve mortgage-lending problems between citizens and lenders in a community (Gricar & Brown, 1981). In that case, the citizens requested intervention by the municipality.

In the absence of a natural authority a relatively powerful stakeholder may serve as convenor. This approach is more likely to be successful when there is already a high degree of recognized interdependence and highly con-

gruent values among stakeholders so that other stakeholders perceive the convenor as legitimate and sufficiently unbiased. On the other hand, when high levels of overt conflict exist among stakeholders, a neutral third party may be the most appropriate and necessary convenor.

Whether the convenor is a stakeholder or a third party, it is critical that all stakeholders believe the convenor has legitimate authority to organize the domain. Stakeholders who question the legitimacy of the convenor may withdraw from the process. An example of precisely this problem occurred in the NCPP. The convenors in this case were two stakeholders, one representing the industrialists, the other, the environmentalists. The latter had served as president of a respected environmental organization and had a proven track record on environmental issues unrelated to coal. Nonetheless, another key stakeholder for the environmental side questioned both the credentials and the motives of this convenor, and for that reason and others (which will be mentioned later), declined to participate in the NCPP. Ultimately, the legitimacy of the convenors enhances or limits their ability to exert authority needed to organize collaboration at the domain level (Friend & Jessop, 1969; Stein, 1976).

Friend, Power, and Yewlett, (1974) and Sarason and Lorentz (1979) identify several personal attributes of those stakeholders who successfully convene networks. These convenors, or "reticulists," appreciate the potential for mutual exchange and envision a mission which can be fulfilled through joint participation. This appreciation of a mission or purpose around which the domain is organized is an important ingredient for success (Sarason & Lorentz, 1979). Additionally, a sense of timing and the ability to scan the environment enhance a reticulist's success in building and sustaining a network (Sarason & Lorentz, 1979; Gricar, 1981b), Finally, convenors see the wisdom in appraising the consequences of contemplated future actions (Friend et al., 1974; Vickers, 1965; Emery, 1977, 1982). Such appraisal stimulates closer appreciation of the underlying interdependencies among stakeholders and allows "latent uncertainties" to come into focus (Friend & Jessop, 1969). Proposition 5 summarizes the qualities of a successful convenor.

> *Proposition 5.* Collaboration will be enhanced by convenors who possess legitimate authority and appreciative skills and who can serve as reticulists to rally other stakeholders to participate.

To summarize, during problem-setting, stakeholders are identified and legitimized, interdependence is recognized, preliminary expectations are established, and the boundaries of the domain are defined. Unless these conditions are established during problem-setting, subsequent efforts to set directions for and to structure the domain will be hampered. Therefore, the above conditions can be thought of both as important outcomes of problem-

setting and as critical preconditions for the next phase of collaboration, namely direction-setting. Now we turn our attention to the direction-setting phase and to conditions which facilitate its successful resolution.

Conditions which Facilitate Direction-Setting

Coincidence in Values among Stakeholders. To the extent that stakeholders develop a coincident appreciation of their problem and a similar set of values to guide the search for a solution, direction-setting is facilitated. Complimentary official goals and common operating goals were correlates of coordination among social service agencies (Schermerhorn, 1975). Ideological consensus or the strength of jointly held beliefs and values (Vickers, 1965; Burns, 1966; Churchman & Emery, 1966; Benson, 1975) forms a basis for agreement about the roots of the problem and about directions for solving it. Hall et al. (1977) have found empirical support for this idea for voluntary but not for mandated interorganizational relationships. In conflict situations, the presence of a superordinate goal (Sherif, 1958) has long been recognized as a productive approach to redefine the problem among combatants. When stakeholders hold conflicting values and widely differing perspectives on the problem, initial interactions must be designed to promote valid exchange of information and to search for common ways of framing the problem. For example, in a study of conflict and collaboration among members of a newly convened municipal advisory committee, an initial survey of preferred agenda items revealed little agreement among members about the problem(s) confronting them (Gricar & Brown, 1981). Direction-setting, in this case, involved 8 months of information exchange and construction of a shared data base before the committee could rally around a coincident value, that of preserving the racially integrated make-up of their community. Writing about interorganizational policy systems, Burns (1966, p. 177) emphasized the role of values in shaping policy direction:

the connexions between these systems must be realized in terms which are categorically different from those applying within the systems. They relate to the value systems of the individual and of the culture (Burns, 1966, p. 177)

Considerable time and effort may be needed before stakeholders achieve coincidence on values for the domain. Frequently, this appreciation emerges out of an extensive search process in which stakeholders jointly amass and review information pertinent to their problem. For example, environmentalists and industrialists from the National Coal Policy Project jointly conducted several fact-finding visits to coal mines before agreeing on directions for their strip mining recommendations (Gray & Hay, 1986). Similarly, in a study of emerging relationships among child care and health organizations, Van de Ven and Walker (1984) found that informal coordination evolved

slowly and was contingent upon the development of shared or complementary missions about clients. On a more generic level, special conferences, known as Search Conferences, have been designed to assist stakeholders in discovering coincident values and preferred directions for their domains (Emery & Emery, 1978; Gilmore, Weiss, & Williams, 1979). Through these conferences, stakeholders explore multiple scenarios about the future and speculate about their implications for the domain. Articulation of preferred "futures" encourages a search for shared values (Vickers, 1965) and the opportunity to explore a collective mission or direction for the domain. Proposition 6 summarizes the above discussion.

> *Proposition 6.* Direction-setting is greatly facilitated by coincidence in values among stakeholders. Joint information search by the stakeholders contributes to the emergence of coincident values and mutually agreeable directions for the domain.

Dispersion of Power among the Stakeholders. In any interorganizational setting, some groups hold greater control over critical resources for solving problems than do others (Benson, 1975; Aldrich, 1976; Cooke, 1977; Jacobs, 1974; Provan, Beyer, & Kruytbosch, 1980). Hence, definition and control of the domain is not totally shared, and may be restricted to formulation of alternatives which are unsatisfactory to some stakeholders. Without direct access to critical resources, some organizations become dependent on and vulnerable to the actions of others in the network (Pfeffer & Salancik, 1978; Aldrich, 1976) and an imbalance of power ensues. Residents of dioxin-ridden Tom's River, Missouri, for example, have become very dependent on the federal government as primary funder of the clean-up efforts there. In well-established networks, power often resides in a group of elites from one or more powerful organizations (Perucci & Pilisuk, 1970; Cooke, 1977; Milward, 1982). In some cases, this inner circle privately negotiates interorganizational agreements among themselves which are then nominally "ratified" in the public forum (O'Toole & O'Toole, 1981). The political economy of any domain, the fact that some stakeholders have greater control over the decision process than others (Friend et al., 1974), cannot be ignored.

As we have seen, however, extreme differences in power can effectively prevent problem-setting. Now we argue that extreme power differences will negatively impact direction-setting also. To garner sufficient requisite variety (Ashby, 1960) for solving problems with widespread impact, mechanisms may be needed to disperse the relative power among several stakeholders. There is considerable evidence to suggest that effective collaboration cannot take place unless key stakeholders possess roughly equal capability to influence domain development (Walton, 1969; Gricar & Brown, 1981; Nemeth, 1970; O'Toole & O'Toole, 1981). This will increase the likelihood that the

necessary data is assembled for problem solving. "Power imbalances not only undermine trust, they can inhibit both the weaker and to a lesser extent the stronger party, such that they do not advance their respective views in a clear and forceful manner" (Walton, 1969, p. 3).

Distribution of power among stakeholders is closely linked to the degree of perceived interdependence among them. Powerful stakeholders who perceive little or no interdependence will undoubtedly try to preserve their control over the domain and resist attempts to share power with other stakeholders. The NCPP again provides an illustrative example of this. Some environmentalists viewed themselves as too powerful to collaborate when attempts to convene the NCPP were underway. In the words of one: "We were winning more amendments than [the industry side] on the Hill and had nothing to gain from this process" (as quoted in Hay, 1983). In other words, the environmentalists' success in traditional arenas amounted to a form of power that was not readily or willingly relinquished in favor of collaborative problem solving.

> *Proposition 7.* Collaboration will be enhanced when power is dispersed among several rather than among just a few stakeholders. An equal power distribution is not necessary and may prove undesirable since it can provoke stalemate and inaction. However, a sufficient distribution of power is necessary to insure that all stakeholders can influence direction-setting.

We are arguing that some balancing of power is essential for direction-setting. The past distribution of power prevented any individual stakeholder from effectively managing the domain. With recognition of interdependence, however, comes the realization that the pooled resources of several stakeholders are necessary to redirect the domain. Widely dispersed power permits individual stakeholders to moderate the impact of the problem on their own operations and to help moderate impacts on other stakeholders as well. A positive incentive for dispersing power is that each stakeholder gains greater functional control over the problem as it impacts them specifically. When several stakeholders direct their resources simultaneously, synergies are obtained; that is, the combined effect is greater than the sum of individual (often countervailing) efforts applied separately.

While this dispersion of power is essential for direction-setting, the risk of stalemate is also real. Balanced, but countervailing, power can stymie efforts to establish a common direction for the domain. As Fox (1982) has pointed out, the existence of an impasse usually indicates offsetting powers among disputants. Under these circumstances, direction-setting reverts to problem-setting in which renewed emphasis on interdependence and increased incentives becomes necessary.

The appreciation of coincident values and dispersion of power among stakeholders enables them to direct their activities toward mutually desirable ends. Once these conditions have been achieved, visible benefits of collaboration can begin to accrue. Often, however, several conditions prompt formalization of a structure to regulate collaborative activities. This third phase of collaboration is called structuring. Three conditions which facilitate structuring are discussed below.

Conditions which Facilitate Structuring

Degree of Ongoing Interdependence. Problem-setting and direction-setting primarily achieve normative changes within the domain. While these normative changes are essential to collaboration, they are often insufficient in themselves to redirect resources or to regulate the ongoing activities of stakeholders. Perceptions of continued dependence on each other for resources, however, will motivate stakeholders to formalize their normative order. Some evidence for this can be found in Van de Ven and Walker (1984) who indicate that resource dependence led to increased interorganizational communications which, in turn, led to formalization of relations among child and health care agencies.

It appears that for structuring to occur, stakeholders must, once again, perceive that they are highly interdependent. At this stage, however, the key motivation is efficacy to influence the future of the domain in the preferred directions. McCann (1980) refers to this as domain viability. Domain viability is said to be low when stakeholders feel ill-equipped to realize the ends defined during direction-setting. Structuring, then, can be seen as a means of increasing domain viability. A formal structure is established with designated roles and responsibilities for insuring that the agreed upon directions for the domain are pursued. A primary internal motivation for structuring, then, is the perceived necessity to influence the implementation of action plans agreed to during direction-setting. A high degree of interdependence promotes greater formalization in structure, whereas for less interdependent stakeholders, a loosely organized exchange of information is sufficient (Van de Ven, Walker, & Liston, 1979).

Proposition 8. Structuring will occur when stakeholders perceive that continued dependence upon each other is necessary to implement their desired directions for the domain.

External Mandates. Often, stakeholders are forced to structure because of external mandates. Schermerhorn (1975) identifies "a powerful external force" among the factors motivating interorganizational cooperation. Provan (1983) has shown that one of the conditions under which federations of organizations tend to form is substantial external pressure. Particularly in the public sector, domains are often established by mandate from some higher

level of government (Milward, 1982). Examples of such mandated collaboration are common, but mandate alone does not guarantee that effective collaboration will occur.

In a study of youth organizations, Hall et al. (1977) identified three bases for coordination: voluntary, mandated, and voluntary/standardized. They found that conditions enhancing coordination differed according to these three bases. In voluntary settings, positive assessment (of the other party's competence and performance and of the compatibility of operating philosophies), higher frequency of contact, and power negotiations were all significantly associated with increased coordination. For mandated relationships, increased coordination was associated with positive judgments of competence and performance, minimization of conflict, and frequency of contact. When interorganizational relationships were governed by contract, positive assessment became insignificant. (Although this does not preclude the fact that positive assessments may have existed prior to the contractual arrangements). However, for mandated relationships, philosophical compatibility was judged to be irrelevant, and power negotiations were found to be less significant because status differences among the stakeholders had already been established.

The extent of collaborative behavior which occurs when relationships are mandated, however, has been questioned (Aldrich, 1976). Factors which limit mandated collaboration include differing degrees of bureaucratization among the organizations (Rogers & Whetten, 1982), cross-governmental consideration such as locus of authority (Widner, 1973), ambiguity about accountability (Friend & Jessop, 1969; Colt, 1970; Widner, 1973), and suspicion about motives (Kaplan, 1980).

We suggest that when structuring is initiated by mandate, some of the earlier mentioned factors conducive to collaboration may not be present. If not, mandated structuring is likely to be less effective than collaborative arrangements entered into voluntarily. It's likely that mandates erect a formal structure within which collaboration can occur (Milward, 1982), but structure without other facilitative conditions is insufficient to promote collaboration. The effects of external pressure on collaboration are summarized in Proposition 9.

> *Proposition 9.* Mandate alone will not generate conditions conducive to collaboration. However, coupled with other conditions (e.g., recognition of interdependence and balance of power), mandate can provide a structural framework for ongoing regulation of the domain.

Redistribution of Power. While we have suggested that power needed to be widely dispersed for earlier phases of collaboration to be successful, this is not necessary (or even always desirable) for the structuring phase of

collaboration. Indeed, a primary reason to engage in structuring may be real-location of power and responsibility within the domain. For example, implementation of the 1973 Community Corrections Act in Minnesota required transferring responsibility for criminal corrections from the state to local counties (Gray & McCann, 1984) and the creation and institutionalization of new coordinative roles for the counties.

Structuring will be initiated at times like this to insure that proposals to redistribute resources will be implemented. Creation of new structures to rechannel resources during this phase also may serve to legitimize a shift in the power distribution within the domain. Concentration of power in the hands of a few stakeholders may eventually become desirable if their actions are central to implementing the agreed upon direction for the domain. A case in point is The National Collegiate Athletic Association which, in the face of increasing external pressures, grew to become a powerful spokesor-ganization for its members (Stern, 1979).

It is important to note here that redistribution of power may be perceived negatively and resisted by those stakeholders who are losing it. In these cases, structuring must proceed with caution. Trade-offs, additional incentives, and the establishment of considerable trust will be necessary to insure the best match between the needs of individual stakeholders and the domain as a whole. While the outcome of structuring may be concentration of power and responsibility for the domain among a few stakeholders, structuring itself is a process of negotiating the rules and regulations to govern the domain and of sanctioning an appropriate power structure to carry them out.

Proposition 10. Effective structuring involves negotiation among all stakeholders about how to regulate the domain, including negotiations about the implementation of actions and the power distribution necessary to do so. One outcome of structuring is an agreed upon allocation of power within the domain.

Geographic Factors. The ramifications of geography become significant when structuring collaborative ventures. Collaboration is positively enhanced by physical proximity of the stakeholders (Schermerhorn, 1975). Physical proximity facilitates frequency of contact, and enhances the likelihood that some interdependence of stakeholders with respect to information resources, clients, etc. already exists. Geographic dispersion also increases the cost of face-to-face collaboration, and introduces the possibility that cultural differences (language, institutional norms, etc.) will render structuring more difficult. Given a choice, Proposition 11 argues that local initiatives to structure collaboration have greater likelihood of success. (See, for example, the classic model of collaboration to confront economic decline at the local community level in Jamestown, N.Y., 1977).

Proposition 11. Geographic proximity facilitates structuring. Local level initiatives can best capture the advantages associated with geography.

Influencing the Contextual Environment. Stakeholders may be motivated to formalize collaborative relationships because of a desire to change or to respond to changes in the contextual environment. In a study of two collaborative projects, Gray and McCann (1984) observed:

> To successfully negotiate and implement a domain level consensus, stakeholders need to protect their collaborative efforts so that they are not threatened and can seize opportunities posed by changes in the larger environment. (p. 14)

Through structuring, for example, stakeholders can organize coalitions to lobby for policy changes important to the domain, they can influence public opinion, and they can initiate formal contacts with other organizations or networks, e.g., on a national level if the original initiative was local, with similar purposes. Failure to attend to and to manage the contextual environment has severely constrained implementation of domain-level consensus (Horwitch & Prahalad, 1981; Gray & Hay, 1985). Even if other reasons to structure the domain are absent, an informal structure to monitor changes within and external to the domain will facilitate (and may be necessary to) acceptance of collaborative agreements.

Proposition 12. Successful implementation of collaborative agreements is contingent upon the stakeholders' collective ability to positively manage changes in their contextual environment. This involves monitoring changes and building relationships with actors outside the domain to insure that domain-level agreements are carried out.

CONCLUSION

Following Trist (1976, 1983) we have argued that collaboration is a viable and necessary approach to confronting many complex problems faced by our society. Constructive response to problems such as declining industries, acid rain, and others which affect multiple sectors of society require analysis at the domain level and the pooling of information and resources among various stakeholders.

While considerable research has been done to explain coordination within existing networks of organizations, the problems of organizing when there are no existing networks has received far less consideration. Interorganizational domains vary considerably in their degree of organization. Focusing on interorganizational domains requires a different approach to

diagnosing problems (Kaplan, 1980; Alderfer, 1979) and requires different methods of organizing stakeholders to work out collaborative solutions to mutually important issues. Many problems will require collaboration among stakeholders who are not members of formally established networks. Traditional bureaucratic problem-solving methods are maladaptive under these circumstances. Therefore, our analysis tried to identify generic conditions conducive to collaboration particularly in these underorganized (Brown, 1980) settings. We have identified several conditions which enhance the initiation and maintenance of collaborative relations among stakeholders.

It should be noted that development of domain-level collaboration is complex and often dialectical in nature (Zeitz, 1980; Gricar & Brown, 1981). Therefore, our model may appear overly simplistic at times. Our efforts at parsimony should not be construed to ignore more complex explanations, but rather to represent areas where considerable agreement already seems to exist. Nonetheless, we recognize the limits to our ability as behaviorial scientists to precisely describe which levers to pull under which circumstances for successful collaboration. By adopting a process view we focus on the temporal salience of facilitating conditions. Successful collaboration, we suggest, depends upon the simultaneous interaction of several conditions at appropriate phases in the process. We argue that inability to achieve the appropriate conditions during each phase may be the best source of explanations to date for why collaborative efforts fail. For example, premature efforts to structure collaborations can render them ineffective because the appropriate mix of stakeholders has not been identified or because those participating have not yet agreed on a common direction for the domain. And the fact that mandated collaborations are less effective than those entered into voluntarily, may be the result of premature efforts to structure those domains.

Clearly, comparative analyses are needed to understand the necessity and relative contribution of all of these conditions to successful collaboration in different settings. We hope that by offering general propositions, we can stimulate both practice and research to sort out the general principles from the contingencies. Toward this end, more longitudinal, process-focused, action-oriented research is needed to capture these complexities. Such research can have significant practical consequences for our society. Convenors, stakeholders, and others who desire to promote collaboration would be wise to examine the subtle process of interorganizational negotiations and to actively attempt to manage collaboration with these processes in mind. The problems await our intervention.

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