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THE ROLE OF INFORMATION IN THE INTERORGANIZATIONAL COLLABORATIVE DECISION-MAKING PROCESS

By

Sandra M. Starnaman

A DISSERTATION

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

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ABSTRACT

THE ROLE OF INFORMATION IN THE INTERORGANIZATIONAL COLLABORATIVE DECISION-MAKING PROCESS

by

Sandra M. Starnaman

In increasing numbers, organizations have become involved in interorganizational relationships (IORs) as a result of a rapidly changing social and technical environment. Until recently, IOR research has focused primarily on the antecedents and consequences of interorganizational linkages. Little research has been devoted to the study of the developmental processes in IORs. Research on the creation of IORs has addressed the key dimensions of the environments in which organizations exist and how the interactions among organizations within environments have been conceptualized. Research on the contingencies that lead to involvement in IORs confirms the idea that organizations enter IORs with one or more agendas. Central to these agendas is the <u>common issue</u> that unites the groups involved in creating an IOR.

The interorganizational decision making responsibilities associated with these issues lies with the organizational representatives or boundary spanners involved in the IOR. The problem addressed in this dissertation is the role of information acquisition and exchange within that decisionmaking process. A model was hypothesized with the exogenous variables of information quality and quantity being positively related to participation in decision making (PDM). PDM was viewed as antecedent to and positively related to satisfaction. Finally, satisfaction was hypothesized as antecedent to and positively related to commitment. Survey data was collected from 129 professionals within a multidisciplinary, multi-organizational project on the constructs of information quality and quantity, participation in decision making, IOR satisfaction, and IOR commitment. Confirmatory factor analysis and path analysis were used to assess the content of the constructs and the relationship among the variable.

The path findings confirm the hypothesized model with an additional link between information and perceptions of satisfaction. The factor analysis findings suggest that for these respondents the constructs of satisfaction and commitment may be more specifically linked to professional identification versus organizational identification. To Craig, with love

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CHAPTER ONE

In discussing their vision of "organizations" in the year 2000, Kanter, Stein and Jick (1992) write that at the turn of the century there will be:

"...more flexible organizations, adaptable to change, with relatively few levels of formal hierarchy and loose boundaries among functions and units, sensitive and responsive the environment; concerned with stakeholders of all sorts -- employees, communities, customers, suppliers, and shareholders....Overall, these are global organizations characterized by internal and external relationships, including joint ventures, alliances, consortia, and partnerships" (p. 3).

In both practice and research, these characteristics of the "organization of the year 2000" are being tested. In increasing numbers, organizations are looking outside of their immediate boundaries to address the broader, more open-ended, less divisible problems that arise within the organizational environment (Aldrich, 1976; Gray, 1985; Ring & Van De Ven, 1994). By the mid-1980s there were 6,000 partnerships among businesses, public sector, and non-profit organizations in the United States (Waddock, 1988). Logsdon (1991) writes that the National Alliance of Business reported that there were 140,000 operating linkages between schools and businesses. As early as 1982, Fottler, Schermerhorn, Wong, and Money, reported that multi-organizational linkages of some sort existed among 35 percent of all nongovernmental, nonprofit hospitals in the United States. In short, within all sectors of the organizational world,

interorganizational connections are becoming a prevalent part of "doing business".

The research literature mirrors these societal trends. For example, Smith, Carroll and Ashford (1995) indicate that there is a wide body of literature supporting the idea that the ability and willingness of organizations to establish cooperative ties across organizational boundaries are essential to organizational growth, innovativeness, and environmental responsiveness. Establishing and maintaining linkages that cross organizational boundaries, however, present an enormous challenge. Varying constraints such as national culture (e.g., Japan vs. the United States), professional rivalry (e.g., medicine vs. nursing), and the vested interests of different stakeholder groups are just a few of the challenges faced by organizations and individuals interested in initiating interrorganizational relationships (IORs) (Halpert, 1982).

To date, IOR research has focused primarily on the antecedents (organizational and environmental) and consequences of interrorganizational linkages. Ring and Van de Ven (1994) note, however, that "(r)elatively little scholarly attention has been devoted to studying developmental processes of IORs" (p. 91). Process, as associated with IORs, refers to the interactions of individuals involved in the development of these linkages and how, according to Ring and Van de Ven (1994) "a relationship might unfold over time" (p. 99). The consequences of IORs, therefore, have their origins not only in the antecedents of these interorganizational linkages, but also in the negotiation processes that occur as organizational agents interact. These interactions, whether at the organizational or individual level, are according to Miller (1995) "inherently communicative" (p. 255).

The goal of this study is to more fully understand the communicative challenges faced by organizational representatives when they endeavor to create interorganizational linkages. In order to do this I will first examine the context or environment in which organizations exist. This will be followed by a review of the literature on the antecedents to IORs and the developmental processes through which IORs are created and nurtured. Finally, arguments regarding a boundary-spanning approach to and a model of participative decision making will be presented to address the role of communication variables in creating and sustaining IORs.

The Changing Environment as a Source of Interorganizational Growth

The environment in which IORs are created is defined by Miller (1995) as "the larger world of institutions and individuals in which a given organization must exist" (p. 252). In a general sense, the development and maintenance of interorganizational linkages can be attributed to increased external pressures, increased constraints on individual organizational decision making (Oliver, 1990), increased levels of interdependence, and the increased need to adapt to a changing environment (Emery & Trist, 1965; Hall, 1992).

Recognition of the impact of the environment on organizations challenges many assumptions of early organizational research. Early theories and the corresponding practices of organizational members worked from the assumption that the environment was relatively stable and, therefore, predictable. This approach fostered the idea that organizations could operate as closed systems (Emery & Trist, 1965; Katz & Kahn, 1978). Based on closed system assumptions, organizational change could be planned and implemented with little responsiveness to

internal and external environments (Mink, Schultz, Mink, 1991). In closed system organizations, the relationship between organizations and their environment(s) has focused primarily on the connection between the technical demands of the external environment and the activities within an organization (Meyer & Scott, 1992).

This assumptive base had to be radically modified, however, to take into consideration the reality of a rapidly changing technical and social environment. As a consequence, changes have arisen in organizational theory and practice that reflect an open systems approach. The open systems approach is based on the assumption that systems (i.e., organizations) are not isolated units but associated in multiple ways to other units within the environment(s) that link them (Bertalanffy, 1968; Buckley, 1967; Katz & Kahn, 1978; Laszlo, 1972). The open systems approach highlights the importance of conceptualizing organizational environment(s) and developing an understanding of the key dimensions of environments which may affect organizational relationships.

Emery and Trist (1965) first noted the increasing complexity of environments in their discussion of the "causal texture of organizational environments" or, in other words, "the processes through which parts of the environment become related to each other" (p. 22). The environmental contexts in which these relational processes operate were conceptualized by Emery and Trist (1965) as falling into four categories: (a) "placid, randomized environment" (p. 24) in which organizations can adapt as single units within a relatively unchanging local environment; (b) "placid, clustered" in which knowledge of the organizational environment and increased coordination start to become important and in which "goals and noxiants are not randomly distributed but hang together in certain ways"

(p. 25); (c) "disturbed, reactive" in which the existence of multiple organizations of the same type create the need for strategic as well as tactical planning within organizations (p. 25); and (d)"turbulent field" (p. 26). Within the turbulent field "the dynamic properties arise not simply from the interaction of the component organizations but also from the field itself. The 'ground' is in motion" (p. 26). In other words, the very way in which the interorganizational field is conceptualized may be in flux.

More comprehensive and specific typologies describing the key dimensions of the environment have been developed as interest in the impact of the environment on organizations and organizational change has grown. Child (1972) addressed the frequency and patterns of change in the environment, the heterogeneity of activities, and competition within an environment. Pfeffer and Salancik (1978) focused on the dispersion of power, scarcity of resources, and the interconnectedness within an environment. Perhaps the most complete typology was presented by Aldrich (1979). Aldrich writes that previous research highlights six environmental dimensions that affect an organization or a subset of an organization. The first of these is environmental capacity. Environmental capacity refers to relative availability of resources for an organization within its environment. Environments with a greater number of resources are referred to as "rich" and those with less are referred to as "lean". Resource availability affects the opportunities available to organizations and helps structure their interactions within their environment. Aldrich (1979) notes that "(r)ich environments also have been seen as a barrier to the formation of interorganizational relations, at least of the more formalized kind." (p 63).

The second dimension discussed is <u>environmental homogeneity-</u> <u>heterogeneity</u> or "the degree of similarity or differentiation between the elements of the population dealt with, including organizations, individuals, and any social forces affecting resources" (p. 66). In a homogeneous environment, the creation of standardized procedures encourages the development of products or services that are very similar to each other and the simplification of organizational activities. Heterogeneity within an environment, on the other hand, creates greater complexity because each organization, individual or social force may have to be dealt with in a unique way.

The extent to which there is turnover in the various components in an environment can alter an organization's stability within that environment. This Aldrich refers to as the <u>environmental stability-</u> <u>instability dimension</u>. The formal organizational structures that are so useful for dealing with the routines that emerge within a stable environment may inhibit an organization's ability to deal with changes in an environment.

The fourth dimension Aldrich considers is that of <u>environmental</u> <u>concentration-dispersion</u>. This entails the extent to which resources are evenly spread out or consolidated in a specific location. When key elements in an environment are concentrated in one area organizations can create or adapt strategies to address those elements.

Another concern for an organization is the extent to which others within the environment recognize the organization's domain claims within the environment. <u>Domain consensus-dissensus</u> is of most concern to nonprofit organizations where domain conflict originates over "alleged

duplication of services and efforts by new agencies to encroach on the domains of established organizations" (p. 68).

Finally, drawing on the work of Emery and Trist (1965) Aldrich discusses <u>environmental turbulence</u>. A turbulent environment is one in where the number of both potential and actual linkages and rate of environmental connections are increasing rapidly. Turbulence obscures the rules and definitions for interaction and often makes it difficult to plan for the future.

These environmental dimensions act as challenges to organizational actors by either constraining or enabling activities and interactions. The concept of individual organizations existing within multiple, changing environments is further complicated by the recognition that organizations are not completely autonomous but are linked in multiple ways (i.e., by type, product, or population) to other organizations or stakeholder groups and may be "subsumed under broader structures" (Scott, 1992, p. 181) as their environment becomes more complex or the number of organizations increase (Scott, 1992).

These multiple links serve to create or emphasize the existence of "bounded networks" (Scott, 1992, p. 181) or "domains" (Levine & White, 1961; Thompson, 1967) defined by Gray (1985) as "sets of actors (individuals, groups, and/or organizations) that become joined by a common problem or interest" (p. 912). These bounded networks are the breeding ground for the development of interrorganizational relationships.

Interorganizational Relationships

In his review of the literature on organizational environments, Scott (1992) discusses four ways in which organizational relationships within

environment(s) have been conceptualized. First, the role of a single organization within an organizational set has been studied. The focus here is on how the various organizations within an environment affect the interests of a single organization (Whetten, 1981).

Second, a somewhat more comprehensive approach identifies organizational populations as "aggregates of organizations that are alike in some respect" (p. 127). At the core of this approach is the establishment of boundaries by which organizations can be categorized. Hannan and Freeman (1989) propose two ways of creating boundaries. Boundaries may be created based on common-sense categories that employ either theoretically-based or empirically-based rules to determine common characteristics shared by groups of organizations. The second way in which boundary creation may be viewed is as temporally bound, dynamic forms. This implies that the characteristics used to categorize groups may change over time or as an outcome to the rules being applied.

The next approach Scott considers is called the areal or area based organizational field. This "focuses on the relations among a collection of organizations (and perhaps other types of social units) within a geographic area" (p. 128). It moves the emphasis away from the organization or organizational category to a larger environmental field, and places, according to Scott, two constraints on the study of interorganizational linkages. First, this approach focuses on organizations within the same geographic area. Second it emphasized horizontal relationships among organizations and downplays vertical linkages.

Finally, Scott (1992) argues that in recent years the focus of interorganizational scholars has been expanded to address the functional

similarities of organizations. In defining function, Scott (1992) draws on the related concept of a "societal sector":

(1) a collection of organizations operating in the same domain, as identified by the similarity of their services, products or functions (2) together with those organizations that critically influence the performance of the focal organizations; for example, major suppliers and customers; owners and regulators; funding sources and competitors (pg. 131)

Recognition of these varying approaches to IORs still doesn't answer the question of <u>why</u> organizations are motivated to form interorganizational linkages. Oliver (1990) raises the question..."For what reasons and under what conditions do organizations establish linkages or exchanges with one another?" (pg. 24). In order to link the causes of IOR relationships across a number of different types of IORs, she proposes six broad contingencies that serve as possible causal factors in the creation and sustenance of IORs. Relationship development may, she notes, result from any one of these contingencies alone, but is most often rooted in multiple contingencies.

The first of the contingencies proposed by Oliver (1990) is <u>necessity</u>. Organizations may be required to form IORs to address regulations or legal requirements. This leads to the development of mandated linkages rather than voluntary linkages. In this instance, failure to address these issues may lead, for example, to loss of resources, or professional or legal censure.

<u>Asymmetry</u> motivates IOR development when organizations want to increase their control or power over other organizations. Much of the research on the loss (or fear of loss) of organizational autonomy reflects this contingency (Oliver, 1991; Pfeffer & Salancik, 1978).

An example of the development of an IOR motivated by both the contingencies of necessity and asymmetry is presented by Scott (1992) in his discussion of the convergence of public and professional control systems in health care organizations in the 1980s. In 1972 a federal statute created professional standards review organizations (PSRO's) to monitor the cost and quality of health care within institutions within the United States. While these organizations are made up of both public and professional stakeholders, physician involvement is such that "PSRO legislation protects the fundamental concept that physicians are the most appropriate individuals to evaluate the need and quality of medical service" (Scott, 1992, p. 109)

When organizations are concerned with reductions in costs and increased returns, they may be motivated to form IORs to increase their <u>efficiency</u>. Much of the research focusing on the efficiency contingency, Oliver notes, has emphasized the negative financial consequences of IORs without considering the relationship between concerns for efficiency and the contingencies of necessity, power, and/or reciprocity. The United Way is one example of multiple organizations maximizing their efficiency. Through a single concerted drive a group of charitable organizations reduces the effort necessary to collect donations for multiple causes and increase visibility in the process.

The conception of the organizational environment as a highly uncertain place may motivate organizations to form IORs to improve their stability within an environment. The goal of these unions is to increase

organizations' "stability, predictability, and dependability in their relations with others" (pg. 246).

The norms, expectations and beliefs of others within an environment might also lead organizations to unite to increase their actual or perceived <u>legitimacy</u> within the environment. Linkages with more established or credible units within an environment can strengthen the role of new or less visible organizations. Miller, Scott, Stage, and Birkholt (1995) report that those who forge IOR's among agencies dealing with the needs of the homeless view legitimacy -- along with the contingencies of reciprocity, efficiency, and stability -- as an important motive for establishing interorganizational linkages.

Finally, organizations may be motivated by the desire to pursue common goals or issues. This Oliver (1990) refers to as the contingency of <u>reciprocity</u>. This approach, she indicates, is "theoretically rooted in exchange theory" (p. 244).

While changes within the environment increase the probability of IOR development, and one or more of the contingencies discussed by Oliver (1990) may act as the catalyst for IOR formation, at the core of any IOR is the issue around which the relationship develops. Organizations that unite to form IORs are equally, and perhaps most specifically, tied to the substantive <u>issues</u> that caused the organizations to come together and the activities and transactions that are developed to address those issues. For example, Pasquero (1991) reports on what he refers to a "supraorganizational collaboration" among the offices of the Canadian government, industry, ecology groups, university, and groups of native peoples. Each of these groups had one or more motivations for becoming involved in this IOR, but all were united by the <u>issue</u> of environmental

protection within their country. The possibility or probability of implementing change related to a specific issue, therefore, quite often resides not with an individual organization or stakeholder but with a group of organizations and stakeholders addressing a mutual problem.

When trying to find a way to categorize IORs in terms of the issues, goals, or functions with which they are dealing, one broad distinction that has been suggested is the extent to which there is agreement on the definition of the issues and relevant activities by those involved (Boje & Whetten, 1981; Hall, 1992; Levine & White, 1961; Mulford, 1984; Oliver, 1990; Scott, 1992; Van de Ven, 1976). Interorganizational activities or the issues addressed by those activities fall to a certain extent along a continuum. At one end are routine issues and/or transactions that arise when there is a consensus among those within the domain about the differentiation of role and task, and compatibility of ideological concerns such as goals, problem definition, and process (Mulford, 1984; Boje & Whetten, 1981; Hall, 1992; Scott, 1992). At the other end of the spectrum, however, are <u>unique transactions</u> about which there is little consensus and a high level of uncertainty about functions, roles and activities (Scott, 1992).

Routine interorganizational transactions illustrate the idea that complexity in a domain in which there is a strong consensus can result in "vast new forms of certainty, which organizations may obtain by the mere process of conformity to environmental specifications" (Meyer, 1978, p. 361, 363). Conversely, those interorganizational activities or relationships that are initiated without clearly defined roles, activities, or functions carry a greater degree of uncertainty. Scott (1992) writes:

"Although new laws, administrative agencies, and professional occupations are continually created, giving rise to new

rationalized myths that provide a basis for organized action where none existed before, we would not overemphasize the amount of certainty that results. Laws are often ambiguous and variously interpreted; state and federal bureaus represent an increasingly vast and diverse collection of interests and programs that are often contradictory or competing; and professional occupations challenge one another's visions of truth." (p. 148)

Routine transactions may form the glue that helps preserve the stability of systems in which there is domain consensus. However, within the rapidly changing environments of many organizations and stakeholder groups, it is the unique transactions that are of particular importance and critical interest. It is on transactions at the unique end of the spectrum that this dissertation will focus.

The more ambiguous the issues the greater the challenge to organizations when they try to create mechanisms for interorganizational relationships. In addressing how IORs meet these challenges researchers have traditionally focused on the interorganizational <u>structure</u> chosen.

Whetten (1981), in his review of the interorganizational field, describes three broad ways in which the participation of individual groups involved in IORs is structured. The categories "vary in terms of intensity, form of operational social power, formalization, and scope of coordination activity" (p. 11).

<u>Mutual adjustment</u> is the weakest form of coordination. In mutual adjustment situations organizations maintain most of their own authority. Involvement requires few costs or sanctions. Correspondingly, a mutual adjustment arrangement provides, according to Whetten, a very narrow range of benefits. Activities are more a reflection of the individual needs of an organization or client rather than any overarching issue. The strongest (i.e., most formalized) form of coordination is the <u>Corporate</u>. The corporate form most closely resembles a "single multiunit organization" (Whetten, 1981, p. 13). There exists a single coordinating body which is responsible for maintaining control, monitoring activities, and sanctioning actions that don't reflect the collective goals of the system. Whetten notes that this form is most often resisted by the individual organizations within an interorganizational system.

The third form Whetten discusses, the <u>Alliance</u>, lies between mutual adjustment and corporate. Interorganizational relationships taking this form adopt coordinating characteristics from both corporate and mutual adjustment forms. Alliances attempt "to coordinate autonomous organizations without the authority of a formal hierarchy" (Whetten, 1981, p. 13). Federations, councils, and coalitions are examples of the alliance approach, and organizations developing an IOR using this strategy generally take one of two forms of power distribution. The first power distribution form is the creation of a separate unit with limited decision making authority to deal with the needs or wishes of the individual organizations or groups. The second form involves the development of coalitions or councils in which power rests with the individual members and decision making requires some type of negotiation among members.

A central issue for each of these structure types is the extent to which each of the participating organizations maintain their individual autonomy. Loss of autonomy has been broadly cited as a principle reason organizations fail to create or join existing IORs (Oliver, 1990; Pfeffer & Salancik, 1978). Research conducted by Oliver (1991), however, offers empirical evidence to contradict this position. Her work suggests that even given a potential loss of autonomy, organizations are motivated to work

together to address common issues. The question then becomes how organizations that have chosen to become involved in IORs collaborate in order to negotiate issues such as autonomy. Thus, investigations of the process variables inherent in creating collaborative interactions take on increasing importance.

The <u>process</u> of developing a collaborative agreement relies on the concept of a "negotiated order" among organizations (Day & Day, 1977; Nathan & Mitroff, 1991; Strauss, Schatzman, Bucher, Erhlich, Sabshin, 1963; Trist, 1983). According to Nathan and Mitroff (1991), a "negotiated order exists when organizations have jointly determined the terms of their future interactions with one another" (p. 164). Negotiated order, Trist (1983) notes "will need to be founded on collaboration rather than competition, collaboration being the value base appropriate for adaptive cultivation of interdependence" (p. 273).

Definitions of collaborative agreement highlight the process aspects of the IOR interaction. Ring and Van de Ven (1994) write "....cooperative IORs are socially contrived mechanisms for collective action, which are continually shaped and restructured by actions and symbolic interpretations of the parties involved" (p. 96). Wood and Gray (1991) define collaboration as "occur(ing) when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures, to act or decide on issues related to that domain" (p. 146). Organizations act collaboratively to:

- increase their individual control over or more efficient use of resources such as funding, and political influence,
- increase their legitimacy within the domain or channels of communication (Golich, 1991, Sharfman, 1991, Wood & Gray, 1991),

- create the rules for accessing and using resources or for defining a common problem (Wood & Gray, 1991).

Inherent in the process of collaboration are new roles within new relationships. Therefore, organizations and/or stakeholder groups face important challenges when they engage in collaborative IORs. Rather than decreasing environmental and organizational complexity, collaborative activities may actually increase uncertainty at all levels and create more turbulence within the environment (Bresser, 1988). Wood and Gray (1991) write that collaborative activities can increase uncertainty, complexity and turbulence due to the creation of new levels of dependency among organizations. These activities can (Wood & Gray, 1991):

- increase an organization's transactional costs
- involve them in new bilateral and multilateral relationships
- require the development of new skills and/or the abandonment or reshaping of currently existing and much used skills
- lead to the creation of priorities (policy, economic, institutional) that challenge what the organization may perceive as being its best interest
- close off existing and create new avenues of "action, interactions and relationships" (p. 158)

The potential for creating increased ambiguity in an already ambiguous situation raises the question of how, in developing these new relationships, organizations deal with the processes of collaborative interaction that enable them to not only address the issues for which they are created but also the challenges that arise from increased interdependence. Ring and Van de Ven (1994) write that "...parties must negotiate and commit to achieving congruency in presently expected consequences by undertaking a line of behaviors regarding a (presently uncertainty-filled) future"(p. 99). In order to more fully discuss the process of IOR development it is important to understand some of the basic ideas associated with the concept of <u>exchange</u> within IORs.

Interorganizational Exchange

A broad variety of theoretical perspectives (political, microeconomic, resource dependency, strategic management) have been applied to the study of interorganizational relationships (Whetten, 1981; Ring & Van De Ven, 1994). Regardless of perspective, most approaches are based on the concept of <u>exchange</u> among organizations within a domain. Exchange is designed to either benefit a specific organization or stakeholder group (competition and control), or to create a new unit or process or solve a problem involving all of those concerned (coordination and cooperation). The outcomes of organizational exchange have been characterized and analyzed in terms of <u>resources</u> (goods, services, or personnel), <u>information</u> (Aldrich, 1979; Weick, 1973) or <u>norms and</u> <u>expectations</u> (Scott & Backman, 1990).

In their 1985 review of the literature, Eisenberg, Farace, Monge, Bettinghaus, Kurchner-Hawkins, Miller and Rothman note that lack of integration among the disciplines conducting IOR research (Gottfredson & White, 1981) and conceptual differences among those taking a resource exchange perspective and those taking an information exchange perspective have limited and slowed down research in this area. They indicate that there has also been a confusion in the literature between linkage types and linkage levels. Linkage types consist of either material exchanges associated with resource dependency or information exchanges which tend to be more symbolic in nature and associated with reduction in environmental uncertainty. Linkage levels, on the other hand, refer to levels of analysis. At the <u>institutional</u> level exchanges occur "without the involvement of specific organizational roles or personalities (e.g., routine data transfers between banks)" (p. 236). The next level is the <u>representative</u> level. Exchange at this level "occurs when a role occupant who officially represents an organization within the system has contact with a representative of another organization (e.g., an interagency committee to formulate joint policies)" (p. 236). Finally, the third level is the <u>personal</u> level at which exchange "occurs when an individual from one organization exchanges information or material with an individual in another organization, but in a nonrepresentative or private capacity" (p. 237).

These authors credit Aldrich (pp. 106-135, 1979) with pointing out that the resource and information perspectives are complementary and that the properties of informational uncertainty and resource dependency are related. Thus, one important issue in the study of IOR development is a consideration of the relationship between information and resource exchange.

The relationship between the exchange of information and resources is addressed by McCann (1983). In addressing social problem-solving (SPS) interventions, he proposes a broad three stage process by which social problems are addressed by interorganizational groups. McCann (1983) writes that "the dynamic, unbounded nature of social problems creates many conceptual difficulties that limit a shared understanding of their causes and effects" (p. 177). The difficulty with capturing the definition of the issues can impede the implementation of decisions that relate to resource exchange, structural arrangements, and the renegotiation of roles. The processes proposed by McCann are "three overlapping, though not congruent processes that build upon each other" (McCann,

1983, p. 182). The first process is problem-setting. During the problemsetting process, stakeholders must achieve some level of agreement on the definition of the issue(s) under consideration and clarify the claims of stakeholders through the exchange of information. McCann views this as a critical stage because pressures to take action and/or differences in stakeholder power or influence may constrain the process of problemsetting. These pressures and differences may lead to what Kilman and Mitroff (1979) refer to as effective solutions to the wrong problems. After the problem has been clearly defined, and stakeholders share "a sense of a common predicament" (p. 180), they move on to the direction-setting process. It is during this process that the more desirable end state is determined. Following this decision, the necessary actions of the collaborative and the individual stakeholders to bring this state into being are determined. These two decisions "ideally result in superordinate goals that imply a more or less explicit direction for action by stakeholders" (McCann, 1983, p. 180). It is through this process, McCann writes, that the legitimacy and value of the end goal is established. This legitimacy hinges on the quality of the problem-solving process through which the definitions were created. The final process he refers to as the structural process. This is the stage in which the concerns of "functional viability" (p 180) are addressed. It is through the negotiation of a structural arrangement that mechanisms are created to balance the benefits for each stakeholder, implement policies and programs, facilitate the exchange of resources, maintain the identity of the collaborative, and allow for adaptation to change (p. 181). McCann makes an argument that is intuitively appealing when addressing the development of collaboratives dealing with unique transactions. The stages he proposes suggest a

movement from information exchange to resource exchange that can be used to understand the interaction of individuals involved in the development of IORs.

Before laying the groundwork for a decision making model within a collaborative interaction. I will first summarize the literature discussed to this point. In increasing numbers, organizations have become involved in IORs as a result of a rapidly changing social and technical environment. Until recently, IOR research has focused primarily on the antecedents and consequences of interorganizational linkages. Little research has been devoted to the study of the developmental processes in IORs. Research on the creation of IORs has addressed the key dimensions of the environments in which organizations exist and how the interactions among organizations within environments have been conceptualized. Research on the contingencies that lead to involvement in IORs confirms the idea that organizations enter IORs with one or more agendas. Central to these agendas is the <u>common issue</u> that unites the groups involved in creating an IOR. These issues can be categorized on a continuum from routine (consensus as to role, task, goals, problem definition and process) to unique (a high level of uncertainty about functions, roles and activities). The point at which an issue falls along this continuum has an effect on the complexity of interorganizational interactions.

In a review of the interorganizational field (Whetten, 1981) suggests three forms of coordination by which the participation of individual groups involved in IORs is structured. These include, at one end, <u>Mutual</u> <u>Adjustment</u> in which there is minimal collaboration, few costs and a narrow range of benefits for involved organizations to <u>Corporate</u> at the most formalized end. Between these two lies the <u>Alliance</u>. IORs

(federations, councils, and coalitions) that adopt an Alliance approach attempt to negotiate individual and organizational benefits while minimizing the cost to the individual organizations. This middle ground is where organizations dealing with unique issues most often operate.

The collaboration required for Alliance formation implies the development of a negotiated order based on cooperation rather than competition. In addition, however, to offering new opportunities this collaborative process can create increased uncertainty due to the creation of new roles, relationships, goals, necessary skills, and priorities. The move from initiating an IOR with all of its uncertainty to the development of a sustainable relationship relies on the concept of exchange. A review of the literature on exchange within IORs suggests that within the process of producing an IOR there are two forms of exchange (resource and information) and these forms are interdependent. Consequently, to study the process of IOR development requires investigating the relationship between information and resource exchange. Finally, a three stage process that addresses the development of the relationship between information exchange and resource exchange in social-problem solving was reviewed. This model indicates that stakeholders first define the problem. They then determine the goals and activities necessary to solve the problem. Finally, in order to sustain their collaboration, they create some form of organizational arrangement. Drawing on the literature reviewed above, the remainder of this chapter is organized into four arguments that form a framework for considering participation and information exchange in the IOR development process.

Organizational Representatives as the Carriers of IOR Information

Argument #1: While the goals and outcomes of IORs are conceptualized primarily at the organizational or domain level, the emergent processes or relationships needed to deal with the uncertainty of IORs should be addressed at the representative level (Eisenberg, et al, 1985). Exchanges at the representative level form the point of contact for organizations attempting collaboration. Representatives are the assigned or legitimate negotiators and, as a consequence, the carriers of information for their individual organizations. They form leadership groups having boundary spanning responsibilities for implementing interorganizational activities and relationships (Ring & Van De Ven, 1994).

Organizational members holding boundary spanning roles within organizations are defined by their activities. These activities are "those that serve to functionally relate the organization to its environment" (Adams, 1980, p. 328). The boundary spanner's activities fall into five classes. Specifically, the boundary spanner filters the inputs and outputs of the organization, collects information, represents the organization to the environment and protects the organization from threat or pressure from the external environment (Adams, 1980).

Given these classes of activity, the boundary spanner role is complex and fraught with uncertainty. Boundary spanners must represent their own organization, balance the requirements of their own organization with those external to the organization, interpret information acquired externally and encode information for transmission. The expectation that a boundary spanner will act as both an organizational buffer and an informational conduit can create a high level of role conflict and stress (Adams,1980). For instance, when the boundary spanning role conflicts with other organizational, professional, or administrative roles, there may be an increase in turnover (Eisenberg et al, 1985; Ring & Van De Ven, 1994). In the case in which a professional is holding a boundary spanning position, Eisenberg et al (1985) indicate that turnover

"can impact negatively on the stability of interorganizational systems, since the turnover of key liaisons or boundary role occupants can interrupt long-standing patterns of formal and informal information exchange. Particularly in interorganizational networks where linkages are voluntary, personal, and informationoriented, exchange relations which have developed and strengthened over time are vulnerable to the effects of professional turnover" (pp. 250-251).

An argument can be made, therefore, that if boundary spanners do not display a certain level of commitment to and satisfaction with IOR activities, the organizations in the IOR may withdraw from the relationship before any substantive outcomes can be achieved.

Boundary Spanner Commitment and Satisfaction as Antecedents to IOR Sustainability

Argument #2: Representative satisfaction with and commitment to the boundary spanning activities are necessary for the continued existence of the collaborative.

What does commitment mean at the collaborative level? Because collaboratives by their definition are concerned with bringing about change related to issues of mutual concern, it is reasonable to presume that there is a commitment to the collaborative relationship on the part of involved individuals (Wood & Gray, 1991). In other words, it is likely that those involved will continue their involvement in the IOR until the issues that brought the IOR together have been dealt with. Wood and Gray recognize, however, that those participating are autonomous and, therefore "retain their independent decision-making powers even when they agree to abide by shared rules within the collaborative alliance" (p. 147-48).

What does IOR commitment mean to the boundary spanner? Organizational and/or stakeholder representatives play a linking role within any IOR. This linking role brings with it: 1) expectations about how the IOR will affect their organization or group, 2) expectations, in the case of professionals, about how their IOR involvement will affect their profession, and 3) expectations about how the IOR will affect them personally in terms of their profession and organization. The interaction among boundary spanners creates a context for negotiating, defining, and legitimizing this new role and its accompanying expectations. If there is little commitment to this process, then turnover of organizational representatives may result. If a lack of boundary-spanner commitment leads to turnover in this critical role, "levels of flexibility and efficiency that may have existed in management of the cooperative IOR are likely to be lost as the new 'agents' rely on the terms of the formal agreement and their role designations in resolving matters that their predecessors had dealt with based on psychological contracts and reliance on trust" (Ring & Van De Ven, 1994, p. 104).

Organizational commitment at the individual organization level, as defined by Mowday, Steers, and Porter (1979), refers to "a strong belief in the organization's goals and values, a willingness to exert considerable effort on behalf of the organization and a strong desire to remain a member of the organization" (p. 226). One limitation to applying a
definition of "organizational" commitment to a professional in a boundary spanning role is that it refers to only one object of commitment -- the organization. Boundary spanners, however, have unique roles within an organization. They may be "more distant psychologically, organizationally, and, often, physically from other members of their organization" (Adams, 1980, p. 329). Within the collaborative they must rely more on referent and expert power versus the reward or coercive power available to those who operate primarily within the organization (Adams, 1980; French & Raven, 1959). Finally, "(o)ccupants of boundary roles experience dynamic, dual conflicts with outsiders, on the one hand, and with insiders, on the other hand" (Adams, 1980, p. 331). It is feasible to assume, therefore, that a definition of collaborative commitment at the boundary spanner level should reflect a balance -- though not necessarily an equal balance -- between loyalty to the values and beliefs of the organization and profession and those of the collaborative. To the extent that boundary spanners feel that the goals and values of their collaborative activities support those of their organization and profession, a straightforward definition of organizational commitment can be applied to the boundary spanner.

Boundary spanners' feelings about the extent to which the activities of the collaborative support the values and goals of the individual organizations are reflected in their level of satisfaction. Satisfaction has been defined not only in terms of individual response to specific job tasks (Glisson & Durick, 1988; Locke, 1976), but also as a reflection of how the job allows an individual to meet his/her physical (e.g., pay, working conditions) and psychological needs (e.g., promotion, verbal recognition, interaction with others) (Locke, 1976). The values and goals of 1000 - 10000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1

organizations and professions that lead to a sense of commitment have their origins, at last partially, in the activities and interactions within organizations and professions (Locke, 1976). These activities and interactions allow those within an organization the opportunity to use their skills and to be rewarded for their work (e.g., monetary, promotion, or recognition) (Locke, 1976). Satisfaction with one or more aspects of these variables has been repeatedly discussed in organizational research to as an antecedent to commitment (Decotiis & Summers, 1987; Glisson & Durick, 1988; Locke, 1975; Marsh, & Mannari, 1972; Starnaman & Miller, 1992; Williams and Hazer, 1986).

The activities and interactions of boundary spanners within a collaborative create a linking mechanism for the stakeholder organizations. A certain level of boundary spanner satisfaction is required at each stage of IOR development for the continued growth and/or evolution of the IOR. Boundary spanner satisfaction should reflect both specific experience with the work of the IOR and the psychological and physical needs linking work within the IOR to their organizational positions. In other words, boundary spanners have not only a need to feel that their work within the IOR uses their skills, challenges them, and is worthwhile, but must also sense that this work will bring both physical and psychological rewards within their own organization.

In a general sense boundary spanning activities have been found to be positively correlated with satisfaction with organizational co-workers, promotion opportunities, and pay (Keller & Holland, 1975). If organizational representatives feel that their interorganizational efforts hinder other work goals by creating more difficult working conditions or will not lead to rewards, they may report a lesser degree of satisfaction

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with these activities. If they feel that there is little recognition by others within the IOR of the values and goals associated with their organization and/or profession, they may report less satisfaction with the IOR and its activities. Conversely, if they feel that their activities within the IOR are not recognized within their organization and/or profession and, as a consequence, may not lead to the enhancement of their organizational or professional roles, they may report less satisfaction with the IOR. Therefore, those that report they are satisfied with their interorganizational activities and that these activities reflect and reinforce their organizational and professional expectations should also report commitment to the goals and values of their collaborative group and a willingness to exert effort on the behalf of the collaborative and remain a member of that interorganizational group. Increased satisfaction, therefore, is hypothesized in this research as an antecedent to boundary spanner commitment to collaboratives.

In considering the ways in which satisfaction can be enhanced, early research considered the ability of a job to meet the physical (e.g., pay, good working conditions) and psychological needs (e.g., promotion, recognition) of individuals. A growing body of organizational literature has now, however, moved beyond these task characteristics to focus on the ways in which organizational work is configured. More specifically, researchers have recognized that the process of participating in the decisions within an organization has an effect on individual satisfaction. Because collaborative interorganizational relationships emphasize cooperation over competition, the participation of boundary spanners in the decision making process may be considered as a key mechanism in not only achieving the outcomes of the collaborative, but also in enhancing the satisfaction of boundary spanners.

Decision making within Collaboratives

Argument #3: Decision making at the collaborative level represents decision making in one of its most complex forms. The decision making interactions of boundary spanners are hypothesized to reflect the needs, expectations, values, and goals of all involved stakeholder groups. As a consequence, decision making within a collaborative group requires the participation of all boundary spanners.

At a most basic level, decision making centers around what decisions need to be made, how they should be made, and who should make them. Setting aside the question of "what" for a moment, I would like to briefly discuss "how" and then in greater length consider "who".

The question of how decisions are made has been studied by organizational scholars from a variety of perspectives. For instance, the decision making process has been researched as a rational, normative process in which a problem is defined, information gathered, options evaluated, and ideal decisions made in an orderly fashion (Janis & Mann, 1977). The difficulty with taking the "rational" approach is, according to March and Simon (1958), that it assumes that all alternative choices are known, all the consequences of each choice are known, and that the decisionmaker can rank all possible sets of consequences. The outcomes of organizational decision-making are not always nearly as optimal (March & Simon, 1958) or tidy (Cohen, March & Olsen, 1972) as the rational approach might hope. March and Simon (1958) generated a "satisficing" model of decision-making in which organizational actors search not for an optimal solution, but for one that is "good enough" to deal with the issue under consideration. Cohen, March, and Olsen's (1972) garbage can model is predicated on the idea that problems, solutions and those given the responsibility of decision making are "dumped" together. It is through chance that solutions become matched to problems and the identification of how the decision was made follows the identification of the outcome. So, even in its most simplistic form, decision making is a complex process.

In addition to consideration of the decision making process itself, research has also considered the scope of involvement and role of participants in the decision making process. This interest is based primarily on the assumption that the participation of individuals at all levels within an organization would be good for the organization (i.e., increased productivity) and good for employees (i.e., increased satisfaction) (Locke & Schweiger, 1979). Participation in decision making (PDM) has been defined by Locke and Schweiger (1979) as "joint decision making" (p. 274). This definition, the authors note, doesn't specify who is participating (e.g., only subordinates), the equality of the participation, or the content. It only specifies "participation in the process of reaching decisions" (p. 274).

In a meta-analysis of 45 studies on participation in decision making, Miller and Monge (1986) tested three models of participation suggested by the theoretical literature -- a cognitive model, an affective model and a contingency model. Research that addresses participation from a <u>cognitive</u> <u>perspective</u> emphasizes the relationship between PDM and the "flow and use of important information in organizations" (Miller & Monge, 1986, p. 730). This model is based on the assumption that individuals possess high quality information related to his/her specific job or position. The

opportunity to participate and influence decisions made within the organization will facilitate the use of that information and lead to an increase in productivity and an eventual increase in satisfaction.

Figure 1. Cognitive Model of Participation in Decision Making

Those proposing an <u>affective model</u> view the goal of PDM in terms of the satisfaction brought about by the satisfaction of individual higher order needs. Participation, in this model, is not necessarily related to specific decision making issues but to the perception of a participative climate..."for it is the act, not the informational content, of participation that is the crucial mechanism" (p. 731). Increases in satisfaction must first be achieved before there will be any increase in productivity.

Figure 2. Affective Model of Participation in Decision Making

<u>Contingency models</u> focus on the differences in individuals and situations that could have an affect on need for or use of participation in decision making. For example, researchers taking this approach emphasize that in dealing with certain situations or issues (i.e., complex versus simple) participation may be more or less appropriate.

As a result of their meta-analysis, Miller and Monge found support for both the cognitive and affective models of participation. There is strong support for the idea that perceptions of participation affect

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satisfaction. There is also weaker support for the notion that participation in specific work-related decisions influenced productivity.

Using these models to discuss the participation of boundary spanners within a collaborative is both useful and problematic. The models are useful because they offer a sounding board against which ideas can be tested. They are problematic because interorganizational collaboratives do not necessarily have established structures, roles, values, or goals. As was discussed when considering satisfaction and commitment at the collaborative level, there may be multiple conflicting goals, roles, and values. While these conflicting issues may create problems within individual organizations, they can have even greater ramifications for those involved in collaboratives.

For instance, in comparing participation in decision making in a collaborative to these models, it is important to first consider the outcome of interest. A great deal of previous research has focused on outcomes of individual satisfaction or productivity. In the initial phases of a collaborative, however, one of the key outcomes is the sustainability or continuation of the IOR. This continuation allows for the possibility of more substantial exchanges at a later date. As was proposed earlier, if we consider this at the individual level, boundary spanners who are satisfied with both their collaborative activities and feel that these activities meet their physical and psychological needs, may potentially report a greater level of commitment to the collaborative. This commitment may increase the probability that the relationship will be sustained.

The question of interest for this dissertation, then, is whether the link between participation in decision making and satisfaction can be expected for those participating in the decision making of collaboratives. A growing

body of interorganizational literature highlights certain activities as being essential to the development and sustainability of collaborative relationships. These activities include participation in decision making, development of shared values, conflict negotiation mechanisms, role definition and agreement (Gray, 1985; Ring & Van De Ven, 1994; Wood & Gray, 1991). In discussing their definition of collaboration, Wood and Gray (1991) highlight the significance of the decision making process. Collaborative involvement presumes that "the participants must intend to 'act or decide'" (p. 148). Decisions about domain definition, outcome identification, activities to facilitate outcome achievement, and level and type of involvement must be dealt with in order to bring about interorganizational mechanisms and structures to sustain the domain level change. This definition of a collaborative hinges on those involved engaging "in an interactive process using shared rules, norms, and structures to act or decide on issues related to that domain." (Wood & Gray, 1991, pg. 146).

Decision making within a collaborative, however, is conceptually distinct from decision-making within a single organization. As indicated earlier, decision making in its most basic form is a complex process. When, however, there are multiple actors, representing multiple organizations and/or stakeholder groups with varying cultures, expectations, and needs, then the parameters for determining what decisions to make and how to make them become even more obscured. The negotiation and development of an agreed upon order for the collaborative relies on boundary spanners reaching some level of understanding regarding the underlying roles, rules and outcomes associated with the issues that brought them together. Ring and Van De

Ven (1994) write that "Congruency is a cumulative product of numerous interactions; through these interactions emerge trust in the good will of others and an understanding of constraints on the relationship that may be imposed by a person's organizational role" (p. 100). The decisions made within those interactions will determine future relationships among involved individuals and organizations.

Through the development of increased understanding and trust, a new organizational arrangement or referent structure (Trist, 1983) can emerge linking the stakeholders (Gray, 1985; McCann, 1983). This organizational arrangement is based on members of an interorganizational collaborative group creating at least a minimal set of agreed upon goals, values, and rules related to the issue that forms the basis of their interaction. As a part of this process issues of collaborative roles and the extent to which each representative helps shape the emergent structure have to be addressed. Because collaboratives are based on cooperation, the extent of the influence of individual members may have to be negotiated.

An ideal collaborative situation would involve symmetrical relationships in which each participant has equal opportunity to participate and an equal chance of influencing decisions. Decision making at the collaborative level, however, is very rarely ideal. For example, individual influence based on professional or organizational affiliation could be affected by status distinction or influence differences based on precedence or tradition, expertise, resources, and/or law.

Participation, however, can and has been assessed through both the opportunity to participate and the perceived or actual influence associated with participation. These two dimensions (opportunity and influence) are issues that are at the core of participation research. Early researchers on

participation report that while participation allows individuals to express opinions or views (Argyris, 1955; Locke & Schweiger, 1979), it doesn't necessarily guarantee influence in the final decisions that are made (Hoffman, Burke, & Maier, 1965; Locke & Schweiger, 1979). More current research by Marshall and Stohl (1993b) specifically considers the issues of influence (empowerment) and opportunity (involvement) in a participative structure. In order to obtain a clearer picture of the relationship between these components of participation and the outcomes of satisfaction and performance, Marshall and Stohl (1993b) examined both communication network and individual indicators of empowerment and involvement. They found that the extent that workers within a participative organization are involved and have communication links that would allow them influence in the decision making process is positively related to their level of performance and satisfaction. Questions raised about the differential effects of empowerment or involvement on these two outcomes indicate that empowerment is more strongly linked to satisfaction and performance appraisal than involvement.

While these concepts are discussed in the literature primarily in terms of the participative opportunities and levels of influence of subordinates within an organization, the broad definition used by Locke and Schweiger (1979) (i.e., joint decision making) does not exclude addressing the participation of individuals in collaborative groups. In fact, using these dimensions of participation to discuss the collaborative participation is most appropriate. Boundary spanners, as noted by Adams (1980), collect information, filter organizational inputs and outputs and represent and protect their organization within the external environment. Based on their activities, decisions are made about their organization's role

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within the environment and, as a result, decisions are made within their organization. Adams (1980) notes that "(m)aladaptive decisions are a consequence of inadequate information concerning external events" (Adams, 1980, p. 348).

Because participation in decision making has been consistently linked satisfaction (Jackson, 1983; Marshall & Stohl, 1993b; Miller & Monge, 1986, 1987; Schuler, 1980), it is reasonable to assume that this same link should be considered for boundary spanners in collaboratives. Organizational representatives in IORs have responsibility for decisions made within the collaborative that affect their organizations. This responsibility makes the issues of opportunity and influence in the decision making process critical. It is feasible, therefore, to assume that the more opportunities boundary spanners have for participation in decision making and the greater their level of perceived influence, the more control they will perceive that they have over the collaborative process. This control should in all probability heighten the sense of satisfaction with collaborative specific tasks and help create the perception that there could be both physical rewards (e.g., pay increases) and psychological recognition for their interorganizational activities. Conversely, those who feel that they have limited opportunities for participation and/or limited influence on collaborative activities should be more apt to report lower levels of interrorganizational project satisfaction. Therefore, a positive relationship is hypothesized to exist between participation in decision making and satisfaction.

The Role of Emergent Communication in the Decision Making Processes of IORs

Concerns that PDM research needs to be expanded to deal with the critical role communication plays in facilitating participation have recently been expressed. Monge and Miller (1988) write that "(a) critical dimension of the participative process is the role of communication. To date, however, little scholarly attention has been devoted to this process" (213). These authors suggest that rather than just comparing the attitudes and behaviors of individuals in participative and nonparticipative structures, it would be more informative to study the communication content of decision making. Participation in decision making implies communication. Participation, however, is a complex process and, as a consequence, so is the communication process required to initiate and sustain it.

One example of this complexity is addressed by Marshall and Stohl (1993b). These researchers indicate that a great deal of past research on participative organizations has equated the participative <u>structure</u> with the participative <u>process</u>. Marshall and Stohl (1993b) suggest that the participation literature so far contains a critical design bias. "Participation traditionally has been viewed as a dichotomous variable, a static entity that is either present or absent in an organization. Participation is assumed to reside in the structure of the organization" (pg. 138). Changes, therefore, in the roles, relationships and activities of individuals have been studied in terms of the changes in structure. These authors propose that the emphasis on participative structure does not allow researchers the opportunity to

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study the enactment of participation and limits their ability to address performance and/or satisfaction variations within a participative structure.

A basic assumption throughout the research literature is that the creation of a participative structure reflects the emergent participative process. However, Marshall and Stohl (1993b), in their work on the extent to which individuals actually participate within a participative structure, suggest that the creation of a structure does not necessarily reflect the process or even existence of individual participation. Presupposing that participative structure equals participative process also limits the extent to which emergent communication can be investigated.

Monge and Eisenberg (1987) in their review of the research on emergent communication networks in organizations discuss the relationship between structure and process. They write that in order to discuss the rather fragmented literature on emergent communication it is necessary to address the research on communication networks in terms of structural inquiry. They define structure as "a collection of elements or parts and the set of relationships that connect the parts together" (p. 305). Elements, they note, can refer to organizations, people or even the language that connects the parts of the structure.

Structural theory falls into the following three categories: 1. positional - in which the patterns of relationship within an organization are linked to formally defined positions and roles, 2. relational - in which the "structures lies in the emergent interactions between people" (p. 306). Structure, therefore, is determined at the individual level and emerges through the dynamic processes of interaction, and 3. cultural which focuses on the transmission of symbols and their meanings throughout a social system.

From the attempts to integrate these models, Monge and Eisenberg (1987) draw the following three principles: First, both formal and emergent networks exist and it is through their relationship to one another that they are best understood. Second, each is valid. Third "the predominance of either type of structure is to some degree a function of where an organization is in it evolutionary life cycle" (p 309).

The work of Monge and Miller (1988), Marshall and Stohl (1993b), and Monge and Eisenberg (1987) raise issues and suggest directions for addressing emergent communication within individual participative organizations. The issues raised are of even greater concern within the often equivocal context of collaboratives. For example, collaboratives may prove to be ideal for addressing Miller and Monge's (1988) suggestion that researchers considering participation need to focus on the communication content of decision making. Collaboratives may also allow researchers to highlight the troublesome distinction between participative structure and participative process proposed by Marshall and Stohl (1993).

The literature on emergent communication process and negotiated order suggest a direction for research on decision making in collaboratives. For example, initially a collaborative can best be viewed as a relationship among boundary spanners. Its final structure is, as proposed by the relational tradition discussed in Eisenberg and Monge (1987), determined by the dynamic interactions of individuals. Within the development of a collaborative, information must be shared on topics such as goals and values, and joint definitions determined before decision making can take place.

It is proposed in this dissertation, therefore, that another model of participation in decision making needs to be considered which takes into

account the generative role of information exchange in collaboratives It is based on this contention that the final argument is made and the model proposed.

Argument #4: It is through boundary spanners' <u>acquisition and</u> <u>exchange of information</u> that the <u>decision making processes</u> of collaboratives are based.

The large body of research that led to the development of the cognitive and affective models of participation in decision making (Miller & Monge, 1986) discussed earlier conceptualizes participation as the exogenous variable. The communication process within "participation" is only explicitly mentioned in one of the models. The cognitive model which emphasizes the role of information is based on the idea that "participation in decision making is a viable strategy because it enhances the flow and use of important information in organizations" (Miller & Monge, 1986, p. 730). This presupposes an existing state or condition (e.g., participation) that fosters information exchange. The emphasis is on the <u>use</u> of information as a result of participation.

O'Reilly, Chatman, and Anderson (1987) in discussing the distinction between the <u>acquisition</u> and <u>use</u> of information among decision makers write:

a decision involves the use of information to assess the results of a future course of action, given that some future states of the world are more desirable than others. This implies that a decision maker either has the requisite information available to make the choice or will obtain information through a process of choice (p. 605)

The assumption that boundary spanners as they enter into an IOR will have all of the requisite information for decision making about issues

at the unique end of the spectrum is debatable. They will, in all probability, need to acquire information. The acquisition of information may be done for a number of reasons. McCann (1983) suggests that early on in the evolutionary cycle of groups dealing with social problems, stakeholders need to clearly define the issues with which they are dealing and clarify the claims of the multiple groups involved. As noted by McCann (1983), difficulty with capturing the definition of the issues can impede the implementation of decisions that relate to resource exchange, structural arrangements, and the renegotiation of roles. The acquisition of information may, therefore, be done to clarify the issue or problem under consideration and in order to keep from coming up with effective solutions to the wrong problem (i.e., Type 3 error) (Kilmann and Mitroff, 1979). What Kilmann and Mitroff (1979) term as Type 3 error is not without its critics. Nutt (1984) suggests that this is overly simplistic. He writes that "there are few tests that can be applied to determine if the 'correct' problem has been selected" (p. 447). Nutt (1984) does, however, emphasize the importance of problem definition in decision making. He indicates that issues such as the scope of the problem may affect the definition chosen, and that greater breadth of inquiry will lead to the perception of more available options. So, at a very basic level some problem has to be defined, and solutions proposed. O'Reilly, Chatman and Anderson (1987) note that "(i)f a decision maker requires information to define a problem and to generate a list of alternative solutions, it logically follows that the quantity and quality of information available will be related to the alternatives considered, estimates of probabilities made, and outcomes seen as desirable" (p. 610).

In addition to acquiring information for defining the issues, Adams (1980) points out that boundary spanners are under pressure to filter information based on organizational decision-making criteria. There are 2 types of information that boundary spanners search for and collect for their organizations. The first of these is operating information which is "required for current decision making and policy formation having short-and long-term effects" (p. 342). This type of information, while not completely lacking in uncertainty is more directly accessed because the source and content of necessary information is known. The second type of information Adams discusses is related to situations or events that are less predictable. It is this second type of information that is, perhaps, most central and yet problematic to the activities of the informational boundary spanner in situations in which there is limited domain consensus. This information search is problematic first because the boundary spanners' constituents "who require intelligence for decision making and policy formulation, exercise pressure on them for information that is at least proportional to their uncertainty and to the perceived importance of the information" (Adams, 1980, p. 344). Secondly, according to Adams, there is a tendency by constituents to overrely on the information provided. This in turn may lead to informational boundary spanners waiting until they have collected a requisite quantity of information to corroborate their findings (Adams, 1980). So the boundary spanner is also under pressure to acquire information of a quality and quantity that will enhance or protect the organization's or group's stake in the interorganizational collaboration.

Finally, at the individual level, boundary spanners acquire information to maintain, advance, and/or protect their own role within their parent organization or profession, and the collaborative. O'Reilly, Chatman, and Anderson (1987) write that at the individual organizational level, the structure of the organization, the incentive and/or control systems, and the group norms may all affect the quantity and quality of information available to the decision maker. In extending this idea to boundary spanning decision makers, it could be hypothesized that while the collaborative organization is participative by definition, the organizations or professions that boundary spanners represent may vary in structure, incentive systems, control systems, and group norms. These variations may affect the quantity and quality of information that the boundary spanner has available to share or feels comfortable sharing. As a consequence, the quantity of information available to be exchanged as the new collaborative relationship is being developed may initially be limited due to reliance on traditional structures, systems, or norms. These may serve to reinforce the differences among those involved in the IOR rather than their capacity to work together to address a domain issue (McCann, 1983; O'Reilly, Chatman, & Anderson, 1987; Ring & Van De Ven, 1994). If boundary spanners perceive that information is either not available in sufficient quantity or not being shared by others, then they may also be less inclined to provide information that could possibly further interaction. The lack of available information at the representative level could effectively block or, at least, seriously impede the development of joint decision making.

In order to determine if the information being dealt with within the collaborative is useful for defining the issue, protecting their individual

organizations or stakeholder groups, and advancing, maintaining or protecting their individual role, boundary spanners must establish a context for negotiated order. Putnam (1983) notes that "(n)egotiated order assumes that multiple social realities makeup organizations. These subcultures protect and advance their own interests through negotiating the meaning of social events. Hence, individuals reach an agreement through creating new meanings or by trading off interpretations of events" (p. 52). In a collaborative, negotiated order is an expression, at its most basic level, of the creation of a shared vocabulary. This vocabulary reflects individual organizational and/or professional meanings or the trading off of individual interpretations based to a large degree on organizational and/or professional affiliations. For example, the same words can have very different meanings depending on organizational, professional, or community differences. Actions based on the, perhaps, false assumption of shared meaning could quickly undermine a collaborative effort.

Heimer (1985) uses the term "negotiated information order" (p. 397) to refer to the process of using information to create a negotiated order among stakeholders. She defines negotiated information order as occurring "(w)hen a system of criteria for the social sufficiency of information is worked out by a group of interrelated organizations" (p. 397). Decision making within a collaborative, then, presupposes, relies on, and reflects the gathering, negotiating, and acceptance of information that meets the requirements of the members of the collaborative. This, Heimer (1985) notes has an impact on information gathering.

> When a single actor can implement a decision, then the question is only which piece of information he or she will accept as evidence of the fact that needs to be demonstrated. But when

several actors are required to carry out the decision, then the problem is not so much to get evidence to answer the question, but to get information that everyone concerned will agree is evidence. That is, the information needs to be socially sufficient as well as technically sufficient, and the two are to some degree independent, so that socially sufficient information need not be technically sufficient and vice versa. (p. 397)

This determination of how to define the "evidence" upon which collaborative decisions are made reemphasizes the informational role of the boundary spanner. Based on the idea that the definition and clarification of issues and relationships within the negotiated order of collaboratives have their origins in the quality and quantity of information acquired and used by boundary spanners, the following link is hypothesized between information (quality and quantity) and participation in decision making. A positive relationship is hypothesized between information quality and information quantity and participation in decision making.

Model of Participation in Decision Making within Interorganizational Collaboratives

The model hypothesized in this dissertation assumes that sustaining the interorganizational relationship at the representative level is an important first outcome in creating a structure or situation which allows for the exchange of more tangible organizational level resources (i.e., money, personnel, goods). In order to achieve these outcomes (sustainability and resource exchange), it is necessary for representatives to perceive that they have both the opportunity to participate in decision making and exert influence on those decisions. As an antecedent to participation in collaborative level decisions, boundary spanners must have an adequate amount of what they perceive to be relevant information. Therefore, I propose a model of PDM in IORs in which the generative variable is information acquisition and exchange.

Information Quality --- + --->

Participation --- + --->Satisfaction--- + --->Commitment

Information Quantity --- + --->

Figure 3

Hypothesized Model of Information, Participation, Satisfaction and Commitment in IORs

While commitment to the IOR is the outcome and participation is the crux of this hypothesized relationship, the interaction originates with the exchange of information. In summary, the model (Figure 1) hypothesized in this study illustrates the decision making process for boundary spanners as having its origins in the perceptions of an adequate quantity and quality of available information. This model addresses the impact these variables have on the outcome variable of interorganizational commitment. The next chapter will describe how this model will be tested with groups of boundary spanners involved in multiple inter-organizational/stakeholder, multi-professional projects.

CHAPTER TWO Methods

This chapter explains the methods used to assess the relationships among the quality and quantity of information exchanged by boundary spanners in a collaborative effort, their participation in decision making, satisfaction and commitment. It includes: (1) a description of the project from which the data were drawn, (2) a description of the population, (3) the process of data collection that was used, (4) a description of the survey instrument with a breakdown of the items, and (5) a discussion of techniques used to analyze the data.

The Kellogg Community Partnership Initiative

The Kellogg Community Partnership Initiative is "an effort to establish several models of academic, community-based, primary health centers as a means for redirecting health professions education toward the preparation of graduates more interested in and suited for practice of primary health care in communities" (Richards & Bouhuijs, 1991, pg. 1). In other words, the sites were charged with developing new models of multi-disciplinary, community-based healthcare education for students from medical, nursing, allied health, and social work schools. Based on their proposals, seven sites within the United States received funding from the Kellogg Foundation for five years to become demonstration sites for this initiative. One of the unique characteristics of this project was the mechanism for change. Those involved were expected to develop formal organizational linkages between community and academe to produce out of hospital, community-based health professions education In addition to educational reform, these projects were also involved in informing state and local policy, and the reallocation of resources. The number of representatives in a given project site depended on the number of schools and/or institutions involved and the number of communities involved. For example, at one end of the spectrum, one project site involved an entire state, including all of the medical and nursing programs. At the other end of the continuum, one site was made up of the medical, nursing, and allied health schools in one university and two small rural communities.

The activities of these groups -- which were in year four of the five year project when these data were collected -- were monitored by a Cluster Evaluation Team consisting of nine individuals with backgrounds in Medical Education and Research, Political Science, Medical Economy, Sociology, and Communication.

Respondents

This particular study was part of the larger research and evaluation project. The population consisted of 308 individuals actively involved in the governance and decision making processes of the seven projects. Initially, individuals where chosen for this study based on their formal assignment to governance and decision making groups (i.e., governing boards, curriculum, or evaluation committees). This number was reduced to those groups that were currently active in the implementation of these projects. So, for example, members of the research committees were not included due to their inactivity at the time data were collected. Thus, the relevant population for this study consist of individuals from the medical, nursing, allied health and social work professions representing 21 academic

institutions and individuals representing community health centers and the involved communities at large who had membership on these projects.

Two hundred and seventy two individuals completed either the telephone survey and/or the mail survey. This sample was composed of 198 individuals (73%) who were health professionals (i.e., doctors, nurses, allied health professionals), <u>university faculty or administrators</u>, health officials, or project site coordinators, and 64 individuals (24%) who represent the involved communities (e.g., business people, clergy, government employees, K-12 educators, homemakers and retirees). Ten individuals (3%) responded <u>don't know or no opinion</u>. Of this sample 145 were males (53.3%) and 127 females (46.7%). Education level reflected the predominance of professionals. Two hundred and eight (84%) of the respondents had a bachelor's degree or higher with 181 (66%) having post graduate or professional degrees.

For the final path analysis, 129 cases were used in which individuals responded to all items on all factors. These individuals differed demographically from the broader group of respondents. This sample was composed of 116 individuals (89.9%) who were health professionals (i.e., doctors, nurses, allied health professionals), <u>university faculty or administrators, health officials</u>, or project site coordinators, and 12 individuals (9%) who represented the involved communities (ex., business people, clergy, government employees, K-12 educators, homemakers and retirees). One individual responded <u>don't know or no opinion</u>. Of this sample 63 were males (48.8%) and 66 females (51.2%). One hundred and twenty-two (94.5%) of the respondents had a bachelor's degree or higher with 103 (79.9%) having post graduate or professional degrees.

Administration Procedure

The data were collected through a combined computer assisted telephone (CATI) survey and a follow-up mail survey by the Institute for Public Policy and Social Research at Michigan State University. This approach was used to maximize the response rate from the participant group. Due to the focus on those boundary spanners actively involved in the implementation of an interorganizational, multi-professional project, subject anonymity was not possible. Subjects were given assurances, however, that the data would be reported in aggregate format and individual identity would be protected.

Instrumentation

Twenty-seven of the one hundred and fifty-five items included in the larger measurement instruments were used to assess the factors in this study. Initially, most factors were developed using items from reliable and well-validated instruments. During the process of adapting items to address the evaluation needs of the larger study, however, item content changed or new items were developed. These revisions or new items were developed by the members of Cluster Evaluation Team who had been conducting evaluation data collection at the seven sites for three years prior to the administration of this survey. Every effort was made, therefore, to insure the conceptual and face validity of the items. This face validity had its foundation not only in the evaluation needs of the project, but more basically in the literature on IORs, organizational change, community change, and boundary spanner relationships. The factors used in this study related to individual perceptions of information quality and quantity,

participation in decision making, boundary spanner satisfaction, and boundary spanner commitment. Specific items in these factors are discussed below. The items in the Satisfaction and Commitment factors were measured using four-point Likert-type scales ("to a great extent" to "not at all"). The items in the Information, and Participation factors were measured using five-point Likert-type scales ("strongly disagree" to "strongly agree").

Available Information (Quantity and Quality)

These seven items were developed by the Kellogg Community Partnership Cluster Evaluation Team. They were based on findings from the literature (i.e., IOR, organizational change, community change, and boundary spanning) and site visit evaluations made on this project.

Information Quantity Items:

- Far too little information on important topics is shared among Partnership members.
- Information on the partnership is widely shared among the Partnership participants.
- I receive too much information related to the Partnership. Information Ouality Items:
- The information I receive about the Partnership gives me a clear understanding of the Partnership.
- The information I receive about the partnership is accurate.
- I receive information about the partnership in a timely fashion.
- The information I receive about the partnership is relevant to my needs.

Participation in Decision Making

The individual's perceptions of opportunities for participation and influence in the decision making process were assessed using items developed from the Survey of Organizations developed at the Institute for Social Research at the University of Michigan (Taylor & Bowers, 1972) and Wandersman and Goodman's Community Participation Survey (1991).

Participation in Decision Making Items:

- It is easy to get my ideas across to the project leadership if I have a suggestion.
- I feel I have many opportunities for participation in the partnership.
- When decision are being made in the partnership, the persons affected are asked for their ideas.
- Participation by community representatives on partnerships boards and committees is high.
- Participation by university representatives on partnership boards and committees is high.
- Participation by project staff on partnership boards and committees is high.
- I feel that it is useless to make suggestions about the partnership because decisions are made regardless of my attempts to influence them.
- Decision making in the partnership is broad-based.
- Decisions are made only by a small group of leaders.

Project Satisfaction and Project Commitment

The items used to assess these two factors were developed by the Kellogg Community Partnership Cluster Evaluation Team. They were
based on findings from the literature (i.e., IOR, organizational change, community change, and boundary spanning) and site visit evaluations made on this project.

Project Satisfaction Items:

- To what extent do you feel that others on the Partnership respect your profession?
- To what extent do you feel that other on the Partnership respect the organization for which your work?
- To what extent do you think people in your profession or the organization for which you work positively recognize your work on the Community Partnership?
- To what extend do you find work in your profession to be very satisfying?
- To what extent do you find your work on the Community partnership to be very satisfying?
- To what extent do you expect to receive career benefits from working on the Partnership, such as in terms of promotion or merit pay increases.

Project Commitment Items:

- To what extent would you say you really care about the future of the Community Partnership organization?
- To what extent would you say you are proud to tell others that you are part of the Partnership organization?
- To what extent are the Partnership values similar to the values of your profession or the organization for which you work?
- To what extent does your work on the Partnership contribute to your professional or career development?
- To what extent will your work on the Partnership be detrimental to your professional or career development?

<u>Analysis</u>

This section addresses the types of analysis used in the examination of this model. The analysis proceeded in two steps. The first was the evaluation of the measurement models developed to operationalize the concepts that comprise the proposed path model. Secondly, the structural equation model was estimated.

Confirmatory Factor Analysis

The measurement model was analyzed using the confirmatory factor analysis subroutine of the PACKAGE computer program (Hunter & Lim, 1987). The model was defined by an a priori analysis of the item content. The fit of the specified measurement model to the data was then evaluated by comparing the observed correlations between the variables with the correlations predicted by the measurement model. The items should not only "share a common meaning, the observed correlations must conform to the product rules of internal and external consistency" (Hunter & Gerbing, 1982, p. 276). The criteria, therefore, for confirming the factor structure of each scale were as follows:

1. The content of the items should be <u>homogeneous</u>. This criterion was assessed by checking the face validity of the items to assure that the items fit the underlying construct being measured.

2. The scale should be <u>internally consistent</u>. The items should satisfy the Spearman Product Rule. "That is, the correlation between two items in the same cluster should be the product of their correlations with the underlying trait" (Hunter & Gerbing, 1982). 3. It should satisfy the <u>parallelism</u> requirement. Parallelism refers to the extent to which items in a factor are related in a similar way to other factors.

Path Analysis

The analysis of the path model was performed using the LISREL computer program. Because LISREL uses full information, maximum likelihood techniques, the overall fit of the structural equation model can be evaluated. The output used to assess the fit of the model is the Chisquare estimation of the "goodness of fit" of the model. An insignificant Chi-square indicates a good fitting model. Since Chi-square is sensitive to sample size, the critical N statistic (Hoelter, 1983) was also considered, along with the Adjusted and Unadjusted Goodness of Fit Indices. At a more micro level of analysis, LISREL provides information that helps the researcher assess whether the links specified in the model should be retained or links not specified should be added. This is assessed by looking at the T-values and the Modification Indices. The T-values evaluate the significance of the path coefficients and the Modification Indices assess unspecified parameters and indicates the degree to which Chi-square would drop if a parameter was estimated. The amount of variance accounted for by the model is determined by examining the R-squared values and the Coefficient of Determination.

CHAPTER THREE

Results

This chapter includes the results of the confirmatory factor analysis and the path analysis. Of the 272 respondents, 140 confirmed cases were used for the confirmatory factor analysis. The factors addressed in this dissertation were included in either the mail survey or the telephone interview. These 140 cases represented individuals who returned the mail survey and participated in the telephone interview and, therefore, responded to all factors. For the path analysis, factors were computed using only those cases in which individuals had responded to <u>all</u> items within each factor. These 129 cases were used for the path analysis.

Confirmatory Factor Analysis

The confirmatory factor analysis was used to determine the dimensionality of the measurement scales used to assess information quality and quantity, participation in decision making, satisfaction, and commitment. Two separate information scales were initially predicted--<u>information quality</u> and <u>information quantity</u>. These, however, were found to be strongly correlated (.94) and, therefore, a one factor solution was evaluated. The combined factor had four items from the information quality scale and one item from the information quantity scale. The two items dropped emphasized the extremes of information sharing ("Far too little information on important topics is shared among partnership members" and "I receive too much information related to the partnership"). This factor focused on the extent to which information that is widely shared, relevant, timely, accurate, and leads to a clear understanding of the IOR activities. The resulting scale was internally consistent, parallel with outside factors and had a reliability of .89. The items and factor loadings for this factor are presented in Table 1.

A 9 item scale was initially analyzed to assess <u>participation in</u> <u>decision making</u>. Due to a lack of internal consistency, low factor loadings, and fact that one item loaded more strongly on another factor, five items were dropped. The resulting scale had a reliability of .89 and focused on broad-based member participation. The items eliminated all addressed high levels of involvement by <u>individual groups</u> (e.g., community representatives, university representatives, project staff). The remaining items emphasized in a more broad-based fashion the opportunity to participate, access to project leadership, and the extent to which persons affected are asked for their ideas. Scale items, factor loadings and reliabilities are presented in Table 1.

Three items were dropped from the <u>satisfaction</u> scale leaving a 3 item scale. Examination of the remaining items indicate broad contextual similarity. They all imply that satisfaction with IOR involvement relies on being <u>recognized</u> for one's individual professional identity as well as one's work on the project and being <u>rewarded</u> (i.e., promotion, merit pay increase) for one's work on the project. This factor was internally consistent with a reliability of .57. Scale items and factor loadings presented in Table 1.

Of the five items on the original <u>commitment</u> scale, two were dropped. One was dropped because it loaded more strongly on two other factors, and one due to a lack of internal consistency. Commitment to the

project results from the similarity in the values espoused within the project and those espoused within an individual's profession and organization; a concern about the future of the project, and, finally, unlike the reward concerns associated with satisfaction, a concern that project involvement should not be detrimental to an individual's professional or career development. The resulting three item scale was internally consistent with a reliability of .56. The items, factor loadings and reliabilities are presented on Table 1.

Table 1

Scale Items, Factor Loadings, and Reliabilities

Itom		Eastor Loading
Infor	mation (Quality and Quantity) (Alpha = .89)
1.	The information I receive about the partnership gives me a clear understanding of the partnership.	.82
2.	The information I received about the partnership is accurate.	.81
3.	I receive information about the partnership in a timely fashion.	.74
4.	The information I receive about the partnership is relevant to my needs	.79
5.	Information on the partnership is widely shared among the partnership participants.	.77
<u>Parti</u>	cipation in Decision Making (Alpha = .89)	
Item		Factor Loading
1.	It is easy to get my ideas across to the project leadership if I have a suggestion.	.82
2.	I feel I have many opportunities for participation in the partnership.	.81
3.	When decision are being made in the partnership, the persons affected are asked for their ideas.	.82
4.	Decision making in the partnership is broad-based	.82
~ .		

Satisfaction (Alpha = .57)

1.	To what extent do you feel that others on the Partnership)
	respect your profession?	.59

Table 1 (cont'd.)

S 1
.55
.53
.51
ar on .58
.53

Preliminary Path Analysis

After the factor structure of the measurement model was confirmed, a correlation matrix was run using the PEARSON CORR subroutine of SPSS-PC. This correlation table was then corrected for attenuation due to measurement error using the reliabilities from the confirmatory factor analysis. These corrected correlations were the basis for the path analysis. The initial correlations along with the means and standard deviations and the corrected correlations used in assessing the fit of the model are included in Table 2.

Path Analysis

Analysis of the original model (Figure 2) using LISREL showed the following. The goodness-of-fit index was .965 (Adjusted goodness-of-fit - .883). Twenty percent of the standardized residuals were above 2.0. The coefficient of determination indicates that 8% of the variance is explained by the interaction of the variables. The R-squared values indicate that a majority of the variance is explained by boundary spanner satisfaction (R-squared = .563), with lesser amounts explained by participation in decision making (R-squared = .078) and commitment (R-squared = .102). While the goodness-of-fit index points to a model that is a good reflection of the data, the chi-square analysis of the model (chi-square = 9.67; required chi-square = 7.82/df = 3; p. <.05) suggests that the model does not fit sufficiently well. Examination of the modification indices shows a link between the information factor and the satisfaction factor that is unaccounted for in the model (5.323). Conceptually, adding this link

makes sense as information is hypothesized to play a critical role in the activities of boundary spanners. Since boundary spanner satisfaction has been defined as a reflection of individual recognition and reward both within the collaborative and an individual's organization, a direct link emphasizes the centrality of information in assessing both the psychological and physical rewards necessary for boundary spanner satisfaction. As a result, the model was modified and reassessed.

In model 2 (figure 3), the chi-square analysis indicated a good fit of the model (chi-square = 4.24; required chi-square = 5.99/df = 2, p < .05). The goodness-of-fit index indicated an even better fit of the data to the model (goodness-of-fit = .984; adjusted goodness-of-fit = .919). The standardized residuals above 2 dropped to 10%. The total coefficient of determination rose to 12%. The R-squared values indicate that even more of the variance is explained by boundary spanner satisfaction (R-squared = .581) with participation in decision making (R-squared = .078) and commitment (R-squared = .102) remaining the same. The chi-square of the difference between models 1 and 2 was computed (chi-square = 5.43; required chi-square = 3.84/df = 1, p < .05) The difference was significant with one degree of freedom, therefore, adding the link makes sense mathematically as well. See Table 3 for a comparison of the models.

Finally, the critical N (CN) for Model 2 was computed. Sample size can play a decisive role in analysis of covariance structures. Testing models using a small sample size increases the probability of failing to reject the null and, therefore, accepting the model. Conversely, using a large sample increases the probability of rejecting what might be a useful and informative model. Hoelter (1983) suggests that "(w)hile the CN provides a straightforward method for estimating the sample size for which a model

is statistically acceptable, there are no firm guidelines for assessing the magnitude of CN in relation to deciding whether or not a model is generally acceptable and reasonably reproduces the observed covariance" (p 331). He does, however, provide a rule of thumb for using CN. "CN values exceeding 200(G) indicate that a particular model adequately reproduces an observed covariance structure" (p. 331). For Model 2 the CN value would have to exceed 200. The CN for Model 2 is 206 and, therefore, adds support to the contention that Model 2 is acceptable.

Table 2

Correlations Among the Variables of Information, Participation

Items	1	2	3	4			
1		.75	.25	.28			
<u>2</u>	.85		.32	.34			
<u>3</u>	.35	.45		.27			
<u>4</u>	.39	.48	.48				
Means	12.78	9.83	6.85	4.35			
S.D.	4.49	4.05	1.78	1.55			
Key:							
1. Information Received							
2. Participation in Decision Making							
3. Satisfaction							

in	Decision	Making.	Satisfaction.	and	Commitment	@
_						

4. Commitment

@ Correlations in the lower half of the matrix are uncorrected for attenuation; corrected correlations appear in the upper half.

.28 .75 .32 Information — Participation in — Satisfaction — Commitment Decision Making

Figure 2

Hypothesized Model of Information, Participation in Decision Making, Satisfaction, and Commitment in IORs with Path Coefficients

All coefficients significant, p < .05



Figure 3

Final Model of Information, Participation in Decision making, Satisfaction, and Commitment in IORs

All coefficients significant, p < .05

Table 3

Comparison of Models

	Chi-squa	re df	Coefficient of Determination	R-squared
Model #1 PDM SAT COM	9.67	3	.078	.078 .563 .102
Model #2 PDM SAT COM	4.24	2	.117	.078 .581 .102

T-Values						
	INFOR	PDM	SAT	COM		
Model #1						
INFO						
PDM	3.274					
SAT		12.728				
COM			3.791			
	INFOR	PDM	SAT	COM		
Model #2						
INFO						
PDM	3.274					
SAT	2.348	11.826				
COM			3.791			

CHAPTER 4

Discussion

This chapter includes a discussion of the findings from the measurement model and the path model. Given the extension of the constructs (i.e., information, participation in decision making, satisfaction, and commitment) from the individual organizational context to the interorganizational context, each scale will be discussed individually to assess the degree to which the items reflect or differ from the review of these areas in the literature. These will be discussed in the measurement section. In the path analysis section the total interaction of the final path model will be discussed. Finally, potential research questions and practical issues raised by this dissertation will be addressed.

Measurement Model

In order to facilitate the discussion of each of the factors in the measurement model, the items that define each factor are presented prior to the discussion.

Information Scale:

- 1. The information I receive about the partnership gives me a clear understanding of the partnership.
- 2. The information I received about the partnership is accurate.
- 3. I receive information about the partnership in a timely fashion.
- 4. The information I receive about the partnership is relevant to my needs
- 5. Information on the partnership is widely shared among the partnership participants.

In the theoretical discussion of interorganizational exchange, information acquisition and exchange is conceived of as establishing a context for a negotiated order in which future decision making can take place. Three uses of information were discussed in Chapter 1. Boundary spanners must have access to information that is useful for defining the issues of collaborative interaction; protecting their individual organizations or stakeholder groups; and advancing, maintaining, or protecting their individual roles. The items within this factor reflect these three categories of information acquisition.

Three of the five items in the information scale focus primarily on the quality of information acquired. Information received was assessed in terms of being accurate, timely, and providing a clear understanding of the project. This adds support to the contention of O'Reilly, Chatman, and Anderson (1987) that in order to define a problem or develop a list of possible solutions, decision makers must have information of a quality that allows them to consider alternatives, and determine the most desirable outcomes.

In addition to items tapping information acquisition, one of the five items in the final scale emphasizes that information must be relevant to the needs of the boundary spanner. A final item in the information factor focuses on the idea that information should be widely shared among participants.

To summarize, high quality information is defined in this factor as that which gives a clear understanding of the Partnership. Such information is widely shared, accurate information that is received in a timely fashion. Finally, high quality information is information that is relevant to individual boundary spanner needs.

Participation in Decision Making Scale:

- 1. It is easy to get my ideas across to the project leadership if I have a suggestion.
- 2. I feel I have many opportunities for participation in the partnership.
- 3. When decision are being made in the partnership, the persons affected are asked for their ideas
- 4. Decision making in the partnership is broad-based

Participation in decision making has been cited as essential in the development and sustainability of collaborative relationships (Gray, 1985; Ring & Van De Ven, 1994; Wood & Gray, 1991). In the measurement model confirmed in this research, both opportunity and influence emerged as defining characteristics of the participation construct.

Within the participation in decision making factor, three items that specified a high level of participation by individual groups (i.e., community representatives, university representatives, or project staff) were not confirmed as part of the final scale. A fourth item that said that decisions were made by a small group of leaders also failed tests of unidimensionality. What remained after confirmatory factor analyses were two items that emphasized the ideas that representatives should have many opportunities for participation in decision making, and that that decision making should be broad-based. Additionally, items reflecting ease of communicating ideas to project leadership, and the expectation that those affected should be asked for their ideas where also confirmed as a part of the final scale. Thus, for these interorganizational participants the notion of broadbased, and targeted decision making was associated with effectiveness in participation.

Satisfaction Scale:

- 1. To what extent do you feel that others on the Partnership respect your profession?
- 2. To what extent to do you think people in your profession or the organization for which you work positively recognize your work on the Community Partnership?
- 3. To what extent do you expect to receive career benefits from working on the Partnership, such as in terms of promotion or merit pay inc.

Building on the reward and recognition aspects of previous satisfaction research, this construct was defined as follows in Chapter One. Boundary spanner satisfaction should reflect both the more specific experience with the work of the IOR and psychological and physical needs linking work within the IOR to their organizational positions. However, in empirically validating a measurement scale based on these ideas, two items dropped out of the satisfaction factor. The first is "To what extent do you find working in your profession to be very satisfying?" The second is "To what extent do you find your work on the Community partnership to be very satisfying?" The elimination of these two items suggests that general satisfaction with the work of either one's profession or that of a collaborative relationship were not related to other characteristics of satisfaction considered in this research. Instead, for these boundary spanners the items that proved unidimensional centered around respect for one's <u>profession</u> by others within the Partnership. This suggests that for professionals within a collaborative, the primary focus of identification -and perhaps a primary source of satisfaction -- may be with their profession and not their organization.

A second characteristic of satisfaction confirmed in this study is the extent to which people in their profession or organization positively recognize a boundary spanner's work within an IOR. This may indicate a need for external validation of boundary spanner activities in collaboratives. Because both "profession" and "organization" were used in the item, it is not possible to parse out the influence of each.

The final aspect of satisfaction confirmed in this scale is the expectation that boundary spanners will receive career benefits based on their work in an IOR, such as promotion or merit pay increases. In summary, it appears based on the items confirmed in this scale that boundary spanner satisfaction is less focused on the work associated with the endeavor itself and more specifically focused on the individual recognition and reward for that work.

Commitment Scale:

- 1. To what extent would you say you really care about the future of the Community Partnership organization?
- 2. To what extent are the Partnership's values similar to the values of your profession or the organization for which you work?
- 3. To what extent will your work on the Partnership be detrimental to your professional or career development?

Commitment was hypothesized in Chapter One to reflect a balance between the boundary spanner's loyalty to his/her organization and/or profession and the collaborative. The extent of this loyalty or commitment is determined by boundary spanners' expectations of the effect of collaborative activities on their organization or profession and the effect on them individually.

In the commitment factor, an item assessing the extent of boundary spanner concern about the future of the Community Partnership organization was confirmed. An item that dropped out, however, dealt with the extent to which respondents were proud to tell others that they were part of the Partnership organization.

A second item that supports the hypothesized definition of commitment centers around the similarity of the underlying values of the IOR to those of boundary spanners' professions or organizations. At the core of Mowday, Steers, and Porter's (1979) definition of commitment is the idea that an individual must have "a strong belief in the organization's goals and values" (p 226). It was hypothesized in this dissertation that due to the fact that boundary spanner roles may distance individuals both psychologically and physically for their organizations (Adams, 1980), that boundary spanner commitment to a collaborative hinges on the extent to which the values of the collaborative reflect those of the organization and/or profession. This item, however, also refers to both profession and organization so it is not possible to sort out which is the primary referent or whether the values of the academic organizations and the various professions overlap.

The third item making up this factor focuses on the extent to which individuals' work on the Partnership will be detrimental to their professional or career development. It suggests that to the extent that collaborative activities do <u>not</u> hinder professional or career growth, boundary spanners will continue to be committed to the work of an IOR.

Path Model

The revised model supports the hypothesis that there is a significant relationship between information exchange and participative decision making (.28) and expands on this hypothesis to add a direct link to satisfaction (.14). Given the discussion of the information scale, these

linkages make sense conceptually. In order for boundary spanners to feel that they have both the opportunity to participate in collaborative decision making and influence over decisions, they must first perceive that information is widely shared, leads to increased understanding of the collaborative, and is relevant.

The strength of the path between participation in decision making and satisfaction (.75) might seem to reconfirm the relationship between these variables that has been consistently found in participation research within the intraorganizational arena (Miller & Monge, 1986). As noted in Chapter 1, in an ideal collaborative situation each participant would have an equal opportunity to participate and an equal chance of influencing decisions. One of the items confirmed in the participation in decision making scale in this study is the extent to which decision making is broadly shared. This may suggest that for satisfaction to occur, the impact of status distinction or influence differences based on precedence, tradition, expertise, resources, and/or law must be dealt with.

As the discussion of the PDM scale suggests, these individuals may have entered the Community Partnership Initiative <u>expecting</u> to have extensive influence on the decisions of the Partnership. When the organizational and/or professional positions of the respondents are considered, this makes sense. Boundary spanners, no matter what their level in an organization, are by definition decision makers for their organization. Boundary spanner activities, as discussed in Chapter 1, fall along a continuum based on the ambiguity of the activities, roles, and norms of interaction. At the more formalized end of the spectrum are boundary spanners whose activities and decision making capacity are specifically defined (e.g., bank tellers, receptionists). As boundary

spanning activities become less defined, either by a lack of definition of roles, outcomes, or norms (e.g., collaborative development) or by design (e.g., research), then the expectations of boundary spanners and the potential for organizational or individual professional loss increase. As a consequence, it is feasible to suggest that, when creating interorganizational collaborations around issues about which there are not established goals, or norms of interaction and for which the organizational risk potential is relatively high, those chosen to represent an organization or profession would be individuals who have substantial decision making capacity within the organization.

The final relationship in the model between satisfaction and commitment (.32) is the second strongest link. It indicates that reward and recognition for boundary spanner activities leads to increased commitment. Commitment, however, hinges on not only the similarity of values between the collaborative and the organization and/or profession but also on the negative impact of collaborative involvement on individual career or professional development.

Future Research

Due to the limitations of this study more questions were raised than answered. For example, the examination of the measurement model suggests that further psychometric evaluation is warranted to address the complexity of the information, participation in decision making, satisfaction and commitment factors when used in the collaborative arena.

Additionally, the limited representation of community members in the initial respondent pool and their almost non-existent representation (i.e., 116 professionals vs. 12 community members) in the group used for

the final analysis allows only half of the picture of the collaborative process within the Community Partnership to be presented. The data provide a picture of the collaborative process among the professionals who were involved in this relationship, but not the community members. The criteria for satisfaction and commitment, the expectations for participation in the decision making process, and the role of information may differ radically for representatives of organizations or stakeholder groups that fall outside of institutionalized organizations.

The limitations of the sample, however, also provide an opportunity to explore the ways in which the professional boundary spanners studied constitute themselves as distinct from the organizations they represent. In order to more fully understand the "separate identity" of professionals, two related themes that were touched on in setting up the model for this dissertation, but were not explicitly incorporated into the model or the data collection need to be examined. Their omission limits the findings of this research. These are the role definition of boundary spanners and the organizational forms in which these boundary spanners work.

The Role Definition of Boundary Spanners

The first of these deals with the primary role definition of the respondents. The assumption was made that the predominant linkages of interest were among <u>organizational representatives</u>. Because multiple organizations and communities were involved, it was assumed that the goals and outcomes most beneficial to these groups would be the key issues under discussion and negotiation and/or of concern to boundary spanning representatives. The findings of the current study suggest that the dominant source of identification for these boundary spanners is their

professional affiliation (i.e., physician, nurse, public health professional). It appears, then, that a distinction should be made between those collaboratives in which the representatives solely represent the organization and those in which the representatives identify with both their professions and their organizations. Abbott (1988) writes that collaboration among professionals threatens their jurisdiction over knowledge and the use of knowledge. In studying the similarities and differences among definitions of "profession", Abbott notes that the definitions are similar in the following ways: "Certainly all agreed that a profession was an occupational group with some special skill, Usually this was an abstract skill, one that required extensive training.....In addition, professions were more or less exclusive" (p. 7). Projects such as the Community Partnership Initiative may threaten that exclusivity to the extent that individual representative satisfaction and commitment rely on the impact of individual involvement on recognition, reward and the extent to which that involvement will be detrimental to professional or career development. If professionals are involved in a collaborative that involves the potential redefinition of their professions, the role of information exchange as a mechanism for clarification of roles, expectations, and outcomes may become even more crucial.

The area of role clarification is one that warrants future research. For example, through their identification with their organizations, professions or stakeholder groups, boundary spanners may have certain expectations about the scope and content of their responsibilities. These expectations are associated with the roles they fill within these groups. Roles have been defined by Katz and Kahn (1978) as "standardized patterns of behavior required of all persons playing a part in a given functional

relationship" (p. 43). No matter what the source, these role definitions form the basis for initial interaction among boundary spanners. If, due to a lack of consensus about the domain, its definition, and individual rights and responsibilities, role definitions are challenged or unclear, then attempts to redefine roles can lead to increased uncertainty.

Role uncertainty has been shown to fall into two categories: role conflict and role ambiguity. Adams (1980) writes that one negative outcome of boundary spanner role conflict is an increase in distrust among representatives which tends to inhibit cooperative interaction, interfere with conflict negotiations and resolution among boundary spanners and, as a consequence, increase the negative response to others involved in these activities. Van Sell, Brief, and Schuler (1981) suggest that engaging in boundary spanning activities sensitizes individuals to the conflicting messages they receive and it is as a result of this conflict that they experience increased uncertainty. At the representative level, then, information of importance may center around role explication and stress reduction because role conflict and stress have been cited as causes of boundary spanner turnover (Adams, 1980; Eisenberg et al, 1985; Ring & Van De Ven, 1994). Information acquired about the collaborative, its process or outcomes, may, for example, confirm for the boundary spanner that he or she wants to build or maintain a high profile association with the collaborative or, conversely, distance him or herself from the collaborative.

Researchers addressing the place of shared information in the emergence of participative structure may also want to consider the role of shared information in the distribution of power and the extent to which information exchange builds and fosters trust among participants. For

instance, when organizations come together around issues that are ambiguous and may, as a consequence, lead to goal conflict, a legitimate concern is the extent to which a single group or a coalition may seek to control the overall outcomes. One mechanism for control or power within an organization that is widely recognized is the control of critical information. Power, as defined by Kanter (1977), is "the ability to get things done, to mobilize resources, to get and use whatever it is that a person needs for the goals he or she is attempting to meet" (p. 275). If information is shared among all members of the collaborative, then it can be supposed that power may also be shared.

Addressing the issue of trust, Ring and Van de Ven (1994) suggest that through the numerous interactions of boundary spanners "trust in the good will of others" (p. 100) emerges. Trust is defined by McAlister (1995) as "the extent to which a person is confident in, and willing to act on the basis of, the words, actions, and decisions of another" (p. 25). Two categories of trust have emerged from the literature -- cognitive and affective. Cognitive trust is based on evidence of trustworthiness, while affective trust is identified with the emotional bonds that are created between individuals based on interaction. McAlister indicates that cognitive trust must exist prior to the development of affective trust. The broad exchange of information that meets the quality standards indicated in this factor may be antecedents to the development of cognitive trust.

Institutional Organizational Form

The second general theme that emerges from this research involves the organizational models or forms (e.g., university professional schools) within which professionals work. Organizations may be said to fall along a

continuum. At one extreme are the technical or production organizations that are evaluated on output. At the other end are what are referred to as institutionalized organizations "whose success depends on the confidence and stability achieved by isomorphism with institutional rules" (Meyer & Rowan, 1992, p. 36). Some organizations operate within and/or as a result of what Scott (1992) refers to as institutional environments. "Institutional environments are broadly defined as including the rules, and belief systems as well as the relations networks that arise in the broader societal context" (p. 14). Meyer and Rowan (1992) note that "(n)ew and extant domains of activities are codified in institutionalized programs, professions or techniques and organizations incorporate the packaged codes" (p. 26). One outcome of organizational institutionalization, according to Meyer and Rowan (1992), is the fact that organizational activities and structure may be predominantly defined by the rules, regulations and norms associated with the key professions that make up the organization. Examples of domains around which institutionalized organizations develop are government, professions, union and trade associations (Scott, 1992). Scott and Backman (1990) write that researchers have noted that professionals who work in health care organizations:

... did not behave as conventional employees. They exhibited considerable independence. They were more likely to be guided by the norms and standards of collegial groups beyond organizational boundaries; they were more oriented to the development and exercise of their distinctive skills than to advancement in the organization hierarchy; they were likely to consider career moves between organizations rather than developing commitment to a specific organization. (pp. 23 - 24)

The above goes a long way in explaining the findings of both the measurement and path model. For example, the satisfaction and

commitment of these respondents appears to be oriented to a set of external professional norms. These individual and organizational distinctions, however, raise questions about and create unique challenges to the development of IORs among institutionalized organizations. For example, when applying the concept of institutionalization to organizations, Meyer and Rowan (1992) note that "organizations tend to disappear as distinct, and bounded units" (p. 28). In essence then, institutionalized organizations are mechanisms for sustaining definitions of specific social realities, such as those that determine professional boundaries (Scott, 1992). The process of developing a collaborative such as the Community Partnership calls, therefore, for the revision of the social reality that defines and legitimizes the professional groups involved and their interaction with each other. The recreation of a social reality suggests a more complex process than the exchange of resources. At the organizational level this one central issue suggests that those doing research in this area need to carefully rethink the underlying assumptions about IORs at least to the extent that they are associated with institutionalized organizations. In addition to continuing to probe the process variables, researchers need to examine and possibly redefine the antecedents and consequences of IORs for these types of organizations.

If sustainability is a legitimate outcome for IORs, research addressing the emergent structure of IORs would also be valuable. An underlying argument of this research is that participation in a collaborative relationship leads to the emergence of participative structures. One of the features of the model tested in this dissertation is its emphasis on the role of communication in the emergence of the participative structure. That is, it was not assumed that involvement in a structure defined as participative is

isomorphic with the process of actual participation. As suggested by Marshall and Stohl (1993b) the creation of a structure (e.g., collaborative) does not necessarily reflect the process or even the existence of individual participation. This argument needs to be tested.

In practical terms, this concept of institutionalized organizations and the dominating role of professions means a shift in perspective is necessary to fully deal with the process of initiating, developing and/or sustaining collaborative activities and structures. If the professional "structures" are the "organizations" that are forming the collaborative, then issues such as collaborative leadership, transactional costs, new relationships, collaborative priorities, and avenues for collaborative action need to be addressed from this perspective.

In summary, the findings of this dissertation add support to both the central and critical role of communication for professionals within the collaborative process. The measurement model suggests that the collaborative process itself may be more complex than initially thought with distinctions among organizational types creating different needs within the collaborative. Continued research in this area would benefit those who have responsibility for coordinating collaboratives that call for representation from multiple types of organizations and those who evaluate the success of those collaboratives.

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