Evolution of Collaborative Organizations For Watershed Governance:

Structural Properties, Life-cycles, and Factors Contributing to the Longevity of Watershed Partnerships

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Abstract

This paper is primarily interested in the developmental processes associated with collaborative organizations. When a group of individuals or organizations embraces collaborative processes, makes joint decisions, and acts as a single entity, that group becomes what we term a collaborative organization – a "second order organization" whose membership includes other organizations (or individuals). These organizations are called such things as alliances, partnerships, and watershed management organizations. They are also analytically distinct from the network form of governance because the organizational structure embodying the partnership often relies on other forms of social coordination. Unfortunately, there is little attention in the collaborative environmental management (CEM) literature to the structural properties of this organizational form or how they evolve over time.

This study relies on literature from organizational theory, interorganizational network, collaboration, and institutional rational choice literatures to develop testable propositions related to two research questions: (1) How do collaborative organizations evolve? (2) What are the structural properties of collaborative organizations that influence their ability to persist over time? An improved understanding of the structural properties of collaborative organizations and their evolutionary dynamics (i.e., life-cycles) is important because it advances our understanding of collaborative public management. We also argue that this organizational approach to studying watershed partnerships has a distinct advantage because it provides a means of systematically analyzing, comparing, and contrasting the structure of a watershed partnership.

We begin our analysis by drawing a distinction between the collaboration that occurs among the members of an interorganizational network and the collaborative organizational form in order to illustrate that networks and hierarchical forms of organization are two different mechanisms for improving the governance of a watershed (markets are the third mechanism). We then draw upon the broad literature on organizational life-cycles to understand the developmental processes of a collaborative organization because they often create the parameters that influence the development of its future organizational strategy, structure, and process. A summary model of organizational life-cycles is then used to identify the clusters of issues and problems that the members of a collaborative organization are likely to confront during each stage of development.

Structural inertia theory is then used to argue that collaborative organizations with structures that are reliable, accountable, and reproducible will result in a level of inertia (i.e., stability) that makes them more likely to survive. A framework for describing the structure of a collaborative organization is then presented that focuses on the formal and informal rules that govern the routines, competencies, and repetitive patterns of interaction among organizational members. Our framework argues that member and strategy rules define the collaborative organization's boundaries. Decision rules shape preference aggregation, the distribution of power, distribution of roles and responsibilities, and distribution of participation. Coordination rules focus on exchange relations, monitoring, dispute resolution, and enforcement. We argue that the configuration of the four sets of rules can be used to systematically analyze and compare the structure of collaborative organizations.

We then draw upon well-established "liability of newness" theory to argue that, all else being equal, collaborative organizations have a higher risk of death during the early stages of their life-cycle. We then argue the legitimacy of a collaborative organization is positively related to survival. Moreover, collaborative organizations that have institutionalized (i.e., formalized) their rule structures are more likely to survive than when they rely on informal structures.

The paper then concludes with a discussion of the implications and directions for future research.

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Introduction

A growing number of governmental organizations at the local, state, and federal level collaborate with nongovernmental organizations and individuals to solve collective problems. Such collaborative efforts often lead to the creation of a "second order organization" or what we term a collaborative organization that consists of an organization of organizations (or individuals) whose purpose is often to enhance the governance of the broader interorganizational network. Unfortunately, the structural properties of these organizations, the functions they provide, or the factors that increase the likelihood that these organizational arrangements endure over time is poorly understood. This is particularly true of watershed management partnerships and other forms of partnerships in the area of collaborative environmental management (CEM). This knowledge gap hinders our ability to design collaborative management processes. It is especially troublesome because policy problems (e.g., environment, health care, social service delivery) often require a sustained effort by public and nonprofit organizations over many years. Thus, it is important to have theory to guide practitioners seeking to craft collaborative organizations that can stand the test of time.

This paper utilizes organizational theory, interorganizational network, collaboration, and institutional rational choice research to develop theory related to the structural properties and life-cycles of what we term "collaborative organizations". In the watershed management and collaborative environmental management (CEM) literatures, these collaborative organizations are often called a variety of things such as alliances, partnerships, and watershed management organizations.

Our goal is to develop testable propositions related to the structural properties and evolutionary trajectory of collaborative organizations, and identify factors that influence their ability to endure over a sustained period of time. Specifically, we are interested in answering two research questions:

(1) How do collaborative organizations evolve?
(2) What are the structural properties of collaborative organizations that influence their ability to persist over time?

An improved understanding of the structural properties of collaborative organizations and their evolutionary dynamics (i.e., life-cycles) should advance our understanding of CEM while contributing to our broader understanding of collaborative public management. Thus, our paper should provide guidance to practitioners involved in crafting collaborative organizational arrangements.

Emergence of Collaborative Environmental Management

Collaborative management increasingly replaces hierarchical management in many policy areas (Agranoff & McGuire 2003, 2001). In a world of globalizing information and increasingly dispersed power, collaboration has emerged as an important governance strategy (McGuire 2006). The growth of complex and "wicked" problems which have no clear solutions necessitates collaborative structures (O'Toole 1997). As noted in a recent special issue of *Public Administration Review*: "[T]he past 10 years have seen an explosion of new developments in the area of collaborative public management." (O'Leary et al. 2006, 6)

Nowhere is the growth in collaborative management more prominent than in the environmental arena. In the early 1990s, the U.S. EPA began its Community Based Environmental Program, the Forest Service emphasized collaborative planning with stakeholders, and 18 federal land managing agencies adopted ecosystem management approaches that included collaboration as a central tenet (Carr et al. 1998, Morrissey et al. 1994). In 2000, both the Secretary of the Interior and of Agriculture announced a watershed-based approach for land and resource management, calling for agencies to collaborate with state and local governments, citizens, and interest groups (U.S.D.A. & U.S. D.O.C. 2000). While government policy was shifting toward collaborative approaches, grassroots groups of diverse stakeholders increasingly organized to focus on local environmental concerns such as watersheds (Yaffee et al. 1996; Sabatier et al. 2005; Brick & Weber 2001; Moore 2001).

Watersheds have proven to be a useful policy subsystem for examining collaborative environmental management (CEM) processes. There is now a broad range of research highlighting the important role collaboration has within these governance systems (Imperial 2005a, 2004; Leach, et al. 2002; Leach & Pelkey 2001; Born & Genskow 2001; Imperial & Hennessey 2000; Wondolleck & Yaffee 2000). Indeed, there appears to be a high latent potential for using collaboration to improve watershed governance (Imperial 2005a). Watersheds span political, geographic, and ideological boundaries. Policies and programs are specialized by medium, geographic location, statute, or function (e.g., permitting, enforcement, public education, installing BMPs, issuing grants). The corresponding institutional fragmentation limits any organization's ability to accomplish its mission by acting alone, while creating numerous opportunities for joint action. Thus, environmental problem solving within a watershed's interorganizational networks requires organizations (and the individuals within them) to find ways to collaborate and work together over sustained periods of time to undertake the actions necessary to improve environmental outcomes directly (e.g., restoration projects, changes in permitting processes, etc) or indirectly (e.g., education, improved agency decision making, etc.).

Although locally oriented, collaborative watershed partnerships can garner substantial resources such as public funding and political support. For example, the U.S. EPA's Section 319 grant program emphasizes community-based approaches by providing funding to local watershed organizations to develop and implement management plans (Davenport et al. 1996). State and local governments may contribute by providing watershed groups with resources such as funding, technical assistance, and personnel (Collins et al. 1998; Steelman & Carmin 2002; Nikolic 2005; Bidwell 2003; Ryan & Klug 2005). Such programs often provide the partnership with resources for a designated period of time, in hopes that this assistance will spur the group to form, plan, and conduct restoration activities while building organizational capacity such that the group can continue when government assistance runs out.

By the late 1990s, empirical research describing these collaborative processes began to appear, demonstrating that there are many unique cases (e.g., Kenney 1997; Yaffee et al. 1996; Coughlin et al. 1999). Some studies identified keys to collaborative partnership effectiveness, by distilling "lessons learned" from an examination of partnerships (e.g., Mullen & Allison 1999; Thomas 1999; Born and Genskow 2000; Chess et al. 2000). These studies provide useful data to describe partnership composition, goals, resources, activities, and outputs, which vary considerably across partnerships. They also suggest factors that affect collaborative processes and, their outputs and outcomes. These factors include funding, human resources, technical resources, organization age, membership diversity, scope of activities, local context, organizational structure, and institutions (Leach et al. 2002; Leach & Sabatier 2005; Steelman & Carmin 2002; Born & Genskow 2000; Wondolleck & Yaffee 2000; Koontz & Johnson 2004; Thomas 1999; Koontz 2003).

Moving beyond bivariate relationships, recent research examines the interactive nature of CEM variables, including the structural and institutional properties of partnerships. For example, membership is a structural property that affects partnership activities (Koontz 2003), but over time, partnership activities can also impact membership (Bonnell & Koontz 2007; Koontz et al. 2004). Similarly, who participates in the partnership can shape the legitimacy of the partnership in the broader community, and such legitimacy can, in turn, encourage or discourage additional membership (Sabatier, et al. 2005).

While prior CEM studies provide an important basis for understanding what watershed partnerships look like and the range of factors that can affect their performance, they do not foster much systematic understanding. In a comprehensive review of 37 such empirical studies, Leach and Pelkey (2001) identified 210 "lessons learned." They concluded that these studies failed to promote knowledge accumulation, as most lacked rigorous multi-case comparisons and none analyzed data over long time frames. Sabatier et al. (2005) discuss similar limitations by noting that key factors are typically treated as independently affecting collaborative accomplishments; theoretical development to explain how variables interact over time is only beginning to emerge.

Another area where theoretical development is needed is to expand our understanding of the structural properties of watershed partnerships. Researchers employ different definitions of "partnerships" or avoid the problem by studying a particular type of government sponsored program where partnerships share similar organizational forms. This is particularly troubling because Moore and Koontz (2003) and Imperial (2005a) find considerable variation in the structural properties of watershed partnerships. Understanding structural properties is important because organizational scholars frequently conclude that organizational structure is inextricably linked to the strategy and processes (Miles and Snow 1978).

The lack of longitudinal research on partnerships has limited our understanding of their evolutionary dynamics. Researchers tend to analyze partnerships at one point in time rather than examine their life-cycles. However, as Imperial and Hennessy (2000) demonstrate in their study for the National Academy of Public Administration, there is often a long history of watershed governance efforts in some watersheds with partnerships of various structural forms coming in and out of existence when the governance system is analyzed over time. Researchers also tend to focus on partnerships centered on some form of planning process. The problem is that the structural arrangements used to guide planning are often insufficient for implementing the plan. For example, Imperial and Hennessey (2000, 1996) found that it is common for estuaries in the EPA's National Estuary Program (NEP) to change the structure of

their partnerships when moving from planning to implementation. In addition, as Born and Genskow (2000) have noted:

> Watershed partnerships, particularly with regard to the non-governmental and citizen dimensions, generally do not have the comparatively enduring and stable character of governmental agencies and units . . . they are dynamic and nonlinear; they ebb and flow, become dormant or extinct, and resurface with old and new participants under new names and organizational forms. Furthermore, the balance of responsibility within the watershed partnership between governmental and non-governmental participants can shift markedly during the evolution of the partnership and the execution of its programs . . . (from Genskow and Born 2006, 59).

Thus, in order to improve our understanding of CEM, we must understand the organizational form of a watershed partnership as well as how it evolves over time from inception to death.

Collaboration, Interorganizational Networks, and Collaborative Organizations

One of the obstacles to theory building in CEM and the broader literature on interorganizational networks is that researchers employ different definitions of what they mean by "collaboration" (Wood & Gray, 1991). Some researchers ignore the definitional question by examining a specific type of collaboration. Others recognize different types of collaboration but the analysis is mostly descriptive and little consideration is given to what differentiates activities or how they are interrelated (e.g., Wondolleck & Yaffee, 2000). We join with Bardach (1998), who defines collaboration as any joint activity by two or more organizations intended to create public value by working together rather than separately.

Regardless of the terminology (e.g., public value, collaborative advantage, relational rents), the general argument that collaboration is appropriate when it generates value, better organizational performance, or reduced transaction costs than acting alone is common in the literature (e.g., Bardach 1998; Huxham 1996; Park 1996; Dyer & Singh 1998; Zaheer & Venkatraman 1995). Collaboration is also an interactive process involving an autonomous group of rational actors who use shared rules, norms, or organizational structures to act or make collective decisions (Wood & Gray, 1991). This definition is inclusive enough to encompass a wide range of network relationships between governmental and nongovernmental organizations.

Collaboration is a particular type of network relationship. Networks are structures of interdependence involving multiple organizations that exhibit some degree of structural stability but include both formal and informal linkages and relationships (O'Toole 1997). Relations involve communication; exchange of goods, services, or resources; and the development of shared norms and expectations (Aldrich & Whetten 1981). Collaborative processes occur in different types of networks, such as implementation structures (e.g., Hjern & Porter 1981), policy networks (e.g., Kickert, et al. 1997), and policy subsystems (e.g., Sabatier and Jenkins-Smith 1999, 1993).

In a watershed, there is often a multitude of governmental and nongovernmental organizations (and sometimes individuals) focused on addressing a watershed problem. The totality of this set of organizational actors constitutes the interorganizational watershed. Following network theory, the subsets of organizations that collaborate and work together in a

temporary or ongoing basis to address watershed problems are considered action sets. As Imperial's (2005a) levels of collaborative action framework (LCAF) observes, within any watershed governance system there may be a wide range of collaborative activities underway at any time at the operational, policy making, and institutional level. These activities may or not be related to one another but are being done with the express purpose of enhancing the governance of the larger interorganizational network by creating processes that achieve social coordination. Each collaborative process is governed by its own set of rules that structure the relations among actors, which are conducted primarily on the basis of mutual benefit, trust, and reciprocity – hallmarks of the network mode of governance (Lowndes and Skilcher 1998).

What is a "Collaborative Organization"?

When a group of individuals or organizations embraces collaborative processes, makes joint decisions, and acts as a single entity, that group is acting as a new organization (Jones, et al. 1997; Finn 1996). The by-product of collaborative activities whether intentional or unintentional is the creation of a new organization – a "second order organization" whose membership includes other organizations and possibly individuals with no organizational affiliation (e.g., representative of an affected stakeholder group). Researchers refer to this organizational form in different ways including partnerships (e.g., Teisman & Klijn, 2002), coalitions, alliances/strategic alliances (e.g., Dyer & Singh, 1998; Osborn and Hagedoorn 1997; Gulati, 1995), consortiums, network broker (Mandell, 1984), and network administrative organizations (Provan & Milward, 2001). This difference in terminology often reflects the fact that the researchers are examining different types of organizational arrangements that vary in their structural properties and contexts.

Imperial (2005a) categorizes this as "institutional level" collaboration because the members of the partnership have institutionalized a set of formal or informal rules and norms that govern its members' collective behavior with respect to some strategy or process. They may also adopt rules and norms that encourage or govern collaborative activities at the operational or policy making levels (Imperial 2005a). Imperial (2005a) refers to this new organizational form as a collaborative organization where relationships are based on formal or informal agreements between the members that give concrete expression to this new organizational form (Lowndes and Skelcher 1998).

Collaborative organizations are analytically distinct from the network form of governance because the organizational structure embodying the partnership often relies on other forms of social coordination. Different modes of governance are likely to be appropriate at different stages of the collaborative organization's development (Lowndes and Skelcher 1998). While relations based on mutual benefit, trust, and reciprocity is common in the early stages of developing a collaborative organizations (i.e., the network form of governance), partners need not trust each other and it could even be an inappropriate basis for governing the wide variety of tasks undertaken by a multi-organizational partnership once it has evolved (Lowndes and Skelcher 1998). Instead, the governance systems begin to rely on hierarchy and other organizational rules to govern the behavior. Membership will also create both rights and responsibilities for participating organizations, so members will have to relinquish some of the autonomy enjoyed in other forms of network relationships.

The underlying strategy of the collaborative organization is typically oriented towards improving the governance of the broader interorganizational network by coordinating, organizing, facilitating, or encouraging action by its members as well as among other network members. In some cases, the collaborative organizations acquire their own staff or have staff

support dedicated to it by one of the member organizations. By acquiring its own human resources, the collaborative organization becomes able to absorb the transaction costs associated with organizing, supporting, or conducting collaborative activities among network members. The collaborative organization is also likely created for the purpose of filling some "niche" by providing a needed good or service within the network rather than duplicating some function provided by an existing member of the network.

Collaborative organizations embody a wide range of possible organizational strategies. Some of the strategies commonly observed in the literature include serving as a convener, catalyst for action, conduit for information, advocate, organizer, funder, technical assistance provider, capacity builder, partner, dispute resolver, or facilitator (Himmelman, 1996). Research on watershed partnerships suggests that these strategies are linked in important ways to the membership of the collaborative organization (Koontz 2003; Bonnell and Koontz 2007; Koontz, et al. 2004). Membership may require sharing information or resources. It may even require or encourage participation in collaborative activities at the operational or policy-making activities (Imperial 2005a).

Collaborative organizations also vary in their formality. Some are relatively informal and are structured primarily by informal agreements and the corresponding trust and norms developed as a result of the social relationships developed through repeated interactions. Other collaborative organizations have formal structures institutionalized in state statutes, binding legal documents, or articles of incorporation (Imperial 2005a; Moore and Koontz 2003). Regardless of their level of formality, a common characteristic of this organizational form is that there tend to be no formal hierarchies among the member organizations, even though outside the collaborative organization there may be significant differences in power and authority (Huxham, 1996). They tend to rely on consensus or some form of participative decision making to compensate for imperfections resulting from other decision rules (Bardach, 1998).

The Evolution of Collaborative Organizations

In this paper, we are interested primarily in the developmental processes associated with these collaborative organizations. There is a growing body of theoretical research in areas such as organizational theory, interorganizational networks, and collaboration that posit numerous theories seeking to explain why organizations voluntarily choose to enter into collaborative relationships even though collective action theory (e.g., Olson 1965), game theory's "prisoner's dilemma", and Hardin's (1968) "tragedy of the commons" offer a pessimistic view of the prospects for collaboration. Common explanations are that organizations enter into these relationships to: gain control (i.e., principal-agent theory), access resources such as money, information, or political support and legitimacy (i.e., resource dependency/exchange theory); reduce the costs of service delivery or minimize the costs associated with repeated interactions with another organization (i.e., transaction cost theory); or mimic other organizations by adopting the practices that are believed to be effective (i.e., institutional theory). All of these theories share an adaptation perspective that implies that organizations respond to emerging problems in their environments by building optimal structures and employing various strategies, one of which is participating in interorganizational networks (Kim, et al. 2006, 706).

Organizational theories also identify a wide range of factors that influence an organization's willingness or capacity to participate in collaborative activities. These factors include organizational attributes such as culture (e.g., attitudes towards change), structure (e.g., formalization, centralization, task specialization), resources (e.g., slack resources, staff

expertise and training), and strategy (e.g., innovativeness, boundary spanning) (Alexander 1995). Others argue that symmetries or asymmetries of interdependence among organizations (Park 1996; Alexander 1995; Hall 1995; Alter & Hage 1993) or factors such as program rationale, shared beliefs of participants, mutual trust, and opportunities for mutual benefit (Fountain 1994; Sable 1992; Mandell 1990) influence the propensity for organizations to collaborate.

A review of these different theories is beyond the scope of this paper but it is widely recognized that there is empirical support for a variety of explanations for why organizations are willing to enter into network relationships. Instead, we are interested in what takes place once these relationships begin and these interactions give rise to the development of a new collaborative organization. It is unclear what theory or theories best explains this transition.

Organizational Life-Cycles and Collaborative Organizations

Understanding the early development of an organization is important because the initial "imprinting" establishes the parameters that limit the degree and direction of future development of an organization (Stinchcombe 1965; Kimberly 1980; Cameron and Whetten 1981; Quinn and Cameron 1983). Not surprisingly, there is a great deal of research focused on studying the life-cycle of organizations (Cameron and Whetten 1981, 1983; Quinn and Cameron 1983; Whetten 1987; Miller and Friesen 1983, 1984; Smith, et al. 1985; Hanks, et al. 1993; Others). We believe it is reasonable to propose that the development of a collaborative organization undergoes a similar life-cycle process. Understanding the different stages of the life-cycle of a collaborative organization may help to predict the major problems, decisions, and opportunities that organizations will confront and might provide suggestions for appropriate responses (Cameron and Whetten 1981).

The literature on organizational life-cycles proposes a wide range of models, with various stages, and there is some debate over how the life-cycle analogy should be used. We adopt the less controversial view within the literature that views the "stages" as clusters of issues or problems that an organization's social system must resolve and that the nature of these problems suggests a sequential ordering of the developmental stages (Whetten 1987; Tushman and Romanelli 1985). Progression from one stage to the next should not be viewed as becoming more "advanced". Development also does not need to follow a linear process. For example, an older organization may change its structure in some way that requires it to revert to solving problems associated with an earlier life-cycle stage. Finally, while the last stage of a life-cycle is typically decline and death, there is no reason to presuppose that all organizations die. Accordingly, issues of decline and death are often explained differently in the literature using a variety of competing theoretical perspectives (Whetten 1987).

One of the most common life-cycle models is a four-stage summary model (Cameron and Whetten 1981, 1983; Quinn and Cameron 1983; Whetten 1987). The first stage of development is *entrepreneurial* and, it is marked by early innovation, lots of ideas, entrepreneurial activities, little planning and coordination, the formation of a "niche", and high creativity (Cameron and Whetten 1981; Quinn and Cameron 1983). It is also when the organization develops its ideology and establishes a niche that distinguishes it from other members of the interorganizational network (Cameron and Whetten 1981). During this stage, the formation of the collaborative organization is also heavily influenced by the vision of selected opinion leaders or what Khator (1999) refers to as "champions" (Quinn and Cameron 1983) and what Imperial (2004) refers to as "entrepreneurs" who view the collaborative organization as a means to attract resources.

The second stage, or *collectivity*, exemplifies high cohesion among the members of the collaborative organization, a sense of family, face-to-face communications, and informal communication and structures. The emphasis is on developing and maintaining internal processes rather than on external relationships. It may involve investment of resources in establishing and maintaining the organization that exceeds the value generated from these resources. But the growing sense of commitment to the collaborative organization and support for its mission/strategy justify these investments of resources (Cameron and Whetten 1981; Quinn and Cameron 1983). While the leadership of "champions" for the effort may still be needed, the roles of the coordinator who calls meetings and a facilitator who helps resolve disputes might be increasingly important. It may also be increasingly important that there is a fixer or broker who can keep the group focused on its mission (Imperial 2004).

The *formalization and control* stage is marked by the institutionalization of organizational procedures and the formalization of the collaborative organization's goals and strategy. During this stage flexibility is reduced to create a more stable structure and conservatism reigns. Emphasis also shifts towards the efficiency of production and maintenance of the collaborative organization's ability to achieve its goals (Cameron and Whetten 1981; Quinn and Cameron 1983). During this stage, coordinators and facilitators continue to play an important role. There may be an increased need for someone to play the role of devil's advocate to help avoid group think problems or fixer brokers to help with institutionalization processes. There may even be a need for an unsnarler who can help the group navigate through internal and external bureaucratic constraints (Imperial 2004).

During the fourth stage, the *elaboration of structure*, the organization begins to decentralize decision making to organizational sub-units. The focus shifts towards domain or boundary expansion by expanding on the organizations goals, strategies, or processes. Renewed adaptations and the emergence of new multi-purpose subsystems may be established (Cameron and Whetten 1981; Quinn and Cameron 1983). While leadership roles such as coordinators, facilitators, devil's advocates, and unsnarlers will be needed, there may be a growing need for entrepreneurs and "champions" as the organization continues to grow and specialize (Imperial 2004).

One implication of the life-cycle model is that the governance mechanisms used to structure the relations among the members of the collaborative organization are likely to change as it evolves. Relations among members in the pre-organization stage will largely be informal and governed by trust and a common sense of shared purpose. Once the collaborative organization begins to form, relations become formalized in terms of other procedures and decision rules. While trust and a common sense of shared purpose remain predominant governance mechanisms, there is likely to be some negotiation and contest over the collaborative organization's rules, procedures, membership, and strategy as the partners begin to formalize the organizational structure. Similarly, while trust and informal relationships may remain the life blood of the partnership, informal personal relationships will eventually be replaced by relations based on hierarchy and other formalized procedures as the organizational structure evolves if the organization is to endure. The individuals involved in founding the collaborative organization will eventually be replaced by other representatives from their respective organizations. Their departure will be problematic unless the collaborative organization's rules and procedures become institutionalized and other governance forms like hierarchy and control based on resource, information, or status differentials predominate as the organization matures (Lowndes and Skelcher 1998).

Thus, researchers examining a watershed partnership must be careful when reaching conclusions about how the partnership is governed. While trust and personal relationships are likely to always have some importance, as the effort matures other rules and routines have often emerged that are even more critical in determining how the partnership functions as an organizational entity. Therefore researchers need to be careful about whether they are measuring properties of the social system that governs the interorganizational system associated with the watershed or whether they are measuring properties of the collaborative organization that embodies the watershed partnership.

Another interesting implication of the life-cycle model is that different measures of organizational effectiveness are associated with different life-cycle stages (Cameron and Whetten 1981; Quinn and Cameron 1983). During the entrepreneurial stage, the focus of the collaborative organization is on acquiring the necessary inputs to create and sustain the organization. Success will be associated with flexibility, growth, resource acquisition, and the development of external support (Quinn and Cameron 1983). During the collectivity stage the emphasis is on the ability of the organizational members to develop the trust and relationships necessary to develop effective internal processes that begin reducing the transaction costs associated with internal processes. Appropriate criteria during this stage might be human resource development, morale, cohesion, and trust (Quinn and Cameron 1983). During the third and fourth stages as the collaborative organization matures through the formalization and control and elaboration of structure stages, the focus shifts to emphasizing efficient production and whether investments in relation-specific assets are producing public value. Effectiveness during the formalization and control stage is often gauged by the goal setting, goal attainment, productivity, efficiency, and the degree of stability-control. During the elaboration of structure stage, resource acquisition, growth, and expansion are often used to gauge the effectiveness of the organization (Quinn and Cameron 1983).

Since researchers examine watershed partnerships with vastly different structural properties at different life-cycle stages it should not be surprising when they reach different conclusions about what constitutes and effective watershed partnership. This could explain why the literature on watershed partnerships identifies such a wide range of “lessons learned” and factors that influence the effectiveness of watershed partnerships (Leach and Pelkey 2001). Researchers may also inadvertently bias their findings due to the life-cycle stage they choose to study. For example, many watershed and collaboration researchers are process oriented and examine partnerships involved in planning and figuring out what they will do. Many of these are properly placed in the entrepreneurial and collectivity life-cycle stages. Not surprisingly, when the members of the partnership are surveyed they point to the importance of trust because that is how organization members in these two stages tend to define success. If the same researchers focused on partnerships at later stages of their life-cycles they might find different success measures. Therefore, researchers interested in evaluating the “effectiveness” of watershed partnerships or other types of collaborative organizations must consider how the stage of the organization’s development shapes the organizational members’ perceptions of the appropriate measures of success.

Structural Inertia Theory

The life-cycle model is particularly useful in explaining how a collaborative organization evolves because it highlights the issues and problems that the members of a collaborative organization confront from emergence to maturity. However, it fails to identify the structural properties of collaborative organizations that influence their ability to persist over time. For guidance in understanding this question, we draw upon organizational ecology theory (e.g.,

Hannan and Freeman 1984) to identify structural characteristics that contribute to a collaborative organization's ability to survive.

We expect to find that diversity in organizational forms is likely to be greatest when collaborative organizations are emerging and being organized. Network actors consider, try, and abandon many organizational forms until there is a satisfactory structural fit or failure occurs as resources are expended. A diverse range of organizational forms may be tried because the cost of changing strategies, structures, and processes is much lower than when these organizational routines have been established (Katz and Gartner 1988). However, creating a collaborative organization requires its founding members to mobilize scarce resources (e.g., information, staff time, financial) from potential organizational members. Once these resource commitments are made, they are often difficult to recover and most of the resources allocated to building an organization are lost when it dissolves. Not only are resources required to develop the organization, an ongoing commitment of resources is needed if the collaborative organization is to sustain itself. "Indeed, there appears to be a strong tendency for organizations to become ends in themselves and to accumulate personnel and an elaborate structure far beyond the technical demands of work (Hannan and Freeman 1984, 152)." Thus, there tends to be some measure of stability when viewed over the long-term. Researchers refer to this stability as inertia.

Hannan and Freeman's (1984) structural inertia theory has been applied to a wide range of organizations as well as to interorganizational networks (e.g., Kim, et al. 2006). We postulate that this theory also applies to the collaborative organizational form and helps identify several important structural features related to its ability to endure and survive. Hannan and Freeman (1984) argue that the environment that organizations operate in often creates selection processes that favor organizations whose structures are difficult to change. Therefore the high level of *structural inertia* that exists in a population of organizations is viewed as an outcome of an ecological-evolutionary process (Hannan and Freeman 1984, 149). This does not mean that organizations never change. Instead, it suggests that organizations tend to respond relatively slowly to threats and opportunities. It also suggests that changes in core strategies, structures, and processes will be more difficult to achieve than minor changes to peripheral aspects of the organizations. It also does not imply that inertia is a symptom of "bad management". Rather, it is the result of a well-tuned organizational architecture that exploits strategic advantage to generate synergies among participating organizations (Kim, et al. 2006, 705).

Hannan and Freeman (1984, 153) argue that the modern world favors organizations that demonstrate or at least reasonably can claim a capacity for *reliable* performance and can *account* rationally for their actions. Organizations must have the ability to collectively produce some good or service of a given quality repeatedly and reliably (Hannan and Freeman 1984, 153). Reliability may even be more important to clients or the members of collaborative organization than the efficiency or cost associated with service delivery. Collaborative organizations should also have distinct advantages over other ad hoc network arrangements in that they should be more reliable and suffer from less variability over time (Hannan and Freeman 1984, 153). The collaborative organization must also be accountable and have an ability to document how resources have been used and to reconstruct the series of organization decisions, rules, and actions associated with a set of outputs or outcomes (Hannan and Freeman 1984, 153; Imperial 2005a). Accountability is a critical issue, particularly during the emergence of a collaborative organization when potential members want assurances that their investment of time and other commitments will not be wasted (Hannan and Freeman 1984, 153). At the same time, Imperial (2005a, 2004) observes that too much emphasis on accountability and poorly designed monitoring systems can create disincentives for members to

participate in a collaborative organization. Accordingly, all else being equal collaborative organizations with high reliability and high accountability are more likely to survive than organizations that are unreliable or unaccountable (Hannan and Freeman 1984, 153-154; Amburgey, et al. 1993). Potential members, resource contributors, and stakeholders that provide other forms of support continually test the collaborative organization's reliability and accountability, particularly during the early stages of its creation. If it fails these tests, it is unlikely to sustain the resources and commitments necessary to survive. Accordingly, since organizational change disrupts internal routines and external linkages, it can interfere with reliability and thus make change hazardous (Amburgey, et al. 1993, 52).

The reliability and accountability of a collaborative organization is likely to be related to the organization's life-cycle. It takes time for a collaborative organization's members to develop and acquire relationship-specific skills. Since such skills may have no value outside of the collaborative relationship, members may be reluctant to invest in relation-specific assets until the organization has proven itself (Kim, et al. 2006, 714). Returns on this investment also take time to be realized. Thus, once the organization survives its initial testing period, it may become less risky for members to commit the necessary resources. Conversely, once organizations have made extensive investments of time and other resources in the new collaborative organization, the costs of switching to some new organizational form will rise and increase the members' interest in keeping the collaborative organization going. It is therefore reasonable to assume that the collaborative organization will become more reliable and accountable due to the temporal pattern of investments by its members. We then expect to find that the levels of reliability and accountability will increase with age, at least initially (Hannan and Freeman 1984, 157). Collectively, this suggests the following propositions:

P_1: Collaborative organizations with high reliability are more likely to survive than organizations that are unreliable.
P_2: Collaborative organizations with high accountability are more likely to survive than organizations that are unaccountable or have poorly designed accountability systems that create incentives for nonparticipation.
P_3: Older collaborative organizations will have higher reliability and accountability than younger collaborative organizations.

Reliable and accountable performance requires that the collaborative organization also has an ability to continually *reproduce* its structure. The organization must have nearly the same structure tomorrow that it had today. Thus, the rules, distribution of authority, and communication systems must be reproducible (Hannan and Freeman 1984, 154). While a structure can be continually reproduced by negotiation and consensus decisions, this would have high transaction costs. Instead, a collaborative organization reproduces its structure by institutionalizing a set of standardized rules, routines, and procedures (Hannan and Freeman 1984, 154). Thus, Hannan and Freeman (1984, 155) postulate that the selection process associated with organizational survival favors organizations that have a high reproducibility of their structure. However, Hannan and Freeman (1984, 154) correctly observe that institutionalization is a "two-edged sword". Institutionalization helps lower transaction costs of making decisions and other organizational processes because members no longer need to constantly question its strategy, decision process, or other aspects of organizational existence. Conversely, institutionalization produces inertia because the very system that enhances the reproducibility of the organization makes it resistant to change. Existing organizations have an advantage over newer ones because it is easier for them to continue existing routines than it is for new organizations to create or modify a new one. It also takes time to institutionalize rules, norms, and procedures because there is so much learning by doing during the early stages of

organizational development. Therefore, the reproducibility of a collaborative organization's structure should increase with age. This suggests the following proposition:

P_4: Collaborative organizations that have reproducible structures (i.e., institutionalized rules, routines, and procedures) are more likely to survive than collaborative organizations with nonreproducible structures.

P_5: Older collaborative organizations are likely to have more reproducible structures (i.e., institutionalized rules, routines, and procedures) than younger collaborative organizations.

What is the Structure of a Collaborative Organization?

The organizational theory literature discusses structure in terms of a wide range of features such as the organization's: centralization vs. decentralization of decision making; chain of command; departmentalization; formalization of roles/responsibilities; work/task specialization; coordination mechanisms (i.e., mutual adjustment, direct supervision, and standardization of work processes, outputs, and skills); organizational size (employees, budgets); and technology (how organizations transform inputs to outputs) (Tompkins 2005; Rainey 2003; Hall 1995; Graham & Hays, 1993; Mintzberg 1979). Many of these features are descriptive and provide important ways to compare and contrast different organizations including collaborative organizations.

We are more concerned with a different aspect of organizational structure – the hierarchical layers of strategic and structural features associated with the commitment and mobilizations of resources by the partners of a collaborative organization. We view organizations as structured systems of routines and competencies, which refer to the repetitive patterns of activities by individuals and groups within the collaborative organizations (Amburgey, et al. 1993, 52; Nelson and Winter 1982; Hannan and Freeman 1984; Levitt and March 1988). Routines are then structured by formal and informal rules and norms that direct the commitment and allocation of resources by the members of a collaborative organization. A change in a routine leads to a different organizational outcome and therefore requires the institutionalization of new rules and norms to reproduce that new routine in the future.

Our approach borrows heavily from the institutional rational choice literature associated with analyzing the organizational and interorganizational relationships associated with environmental and natural resource management (Ostrom 1990; Imperial & Yandle 2005; Imperial & Hennessey 2000; Imperial 1999a, 1999b; Blomquist 1992; Koontz 2005; Andersson 2004; Lam 1998; Gibson et al. 2000). This literature argues that institutions are "enduring regularities of human action in situations structured by rules, norms, and shared strategies, as well as by the physical world. The rules, norms, and shared strategies are constituted and reconstituted by human interaction in frequently occurring or repetitive situations (Crawford & Ostrom 1995, 582)." Thus, institutions include families, churches, government agencies and most *organizations* since they are defined by rules, norms, and shared strategies (Ostrom et al. 1993, 6). Institutions promote socially beneficial outcomes by helping actors resolve "social dilemmas" resulting when individually rational actions aggregate to produce socially irrational outcomes (Firmin-Sellers 1995, 203).

What differentiates institutional analysis from other forms of organizational analysis is the focus on rules. Rules are an implicit or explicit attempt to achieve order and predictability among humans (Ostrom 1999, 1986). Rules are prescriptions that forbid, permit, or require some action or outcome and the sanctions authorized if the rules are not followed (Crawford &

Ostrom 1995, 584). Rules can be formal (e.g., laws, policies, regulations, etc.) or informal (e.g., unwritten shared understandings). These informal rules are sometimes referred to as "rules-in-use" because they are the rules that individuals refer to when asked to explain and justify their interactions with fellow participants in a network (Ostrom et al. 1994, 39). Rules also tend to be nested in another set of rules that define how the first set of rules can be changed (Kiser & Ostrom 1982). Rules can therefore operate configurationally in that the way one set of rules within an organization functions depends upon the way it interacts with other rules that may function at higher or lower levels. Thus, hierarchical, polycentric, and nested rule structures are common (Kiser and Ostrom 1982; Ostrom 1999, 1986; Firmin-Sellers 1995; Imperial 2005a).

Institutional analysis' focus on rules has proven to be helpful in understanding a variety of collaborative processes where the relationships between individuals and organizations are governed by a collection of formal and informal rules (O'Toole 1996; Rhodes 1990). Watershed partnerships, in particular, have been examined with this approach in recent years (Imperial 2005a, 2004, 1999b; Lubell 2004a, 2004b, 2000; Lubell, et al. 2002; Sabatier, et al. 2005; Imperial & Kauneckis 2003; Imperial & Hennessey 2000; Margerum & Born 2000). For example, Imperial (2005a) uses a modified version of Kiser and Ostrom's (1982) framework of constitutional, collective choice, and operational level rules to analyze the relationship between a wide range of collaborative activities occurring at different levels and the development of collaborative organizations in six watersheds.

It is clear that the structure of collaborative organizations vary in their formality and authority (Imperial 2005a; Moore & Koontz 2003). At the formal end of the spectrum are collaborative organizations where important elements of the rule structure are embodied in state statutes or binding legal documents like a charter, by-laws, articles of incorporation. They might also be embodied in a formal document that creates a sense of legitimacy and identifies the distribution of important rules. For example, the estuaries in the EPA's national estuary program have to adopt a management conference agreement that specifies such things as the members and committee structure overseeing the planning process (Imperial and Hennessey 2000, 1996). In the middle of the spectrum, certain aspects of the rule structure might be contained in a formal document like a plan or a website might contain a roster of partners or describe how the partnership operates. At the informal end of the spectrum would be organizations where the rules are embodied entirely in informal norms and social agreements. This is common during the earliest stages of the partnership while rules are still being developed and formalized (Imperial 2005a; Moore & Koontz 2003).

Regardless of their level of formality, we believe that collaborative organizations can be described in terms of different types of rules that operate configurationally and give structure to a pattern of relationships between the members of the organization and guide the routines that serve to distinguish the organization from others in the interorganizational network. The two most important sets of boundary defining rules are what we term *member rules* and *strategy rules*. Collaborative organizations tend to be strategic in nature and formed for specific purposes and to address specific problems. The combination of purposes and problems helps shape the membership. Conversely, a given subset of network actors is limited in terms of what they can do by their resources, authorities, and competing ideas and positions on policy matters. Accordingly, the selection of the collaborative organization's membership will influence and constrain its strategy (Bonnell & Koontz 2007; Koontz et al. 2004; Imperial and Kauneckis 2003). Therefore, we term these the boundary rules because the combination of these rules helps differentiate the collaborative organization from other network members. Membership and strategy rules are also important because they can add to the sense of legitimacy or illegitimacy of the collaborative organization. The presence or absence of members and the problems

addressed by the partnership may influence whether the collaborative organization is viewed as a legitimate or illegitimate response to watershed problems, which in turn may influence its ability to attract members or resources.

Member rules comprise the set of rules pertaining to who can or cannot be a member of a collaborative organization. They can establish different types of members (e.g., voting vs. nonvoting). Some collaborative organizations have restrictive membership rules while others are more inclusive. While organizations typically comprise its membership, there also can be provisions for citizens or interest group representatives to serve as members (Imperial 2005a; Moore & Koontz 2003; Bardach 1998). Membership in a collaborative organization can either be voluntary or mandated by some higher-order set of rules (e.g., state statute). As the organization evolves, it typically creates rules pertaining to the addition of new members and how that process occurs. Similarly, rules may be crafted to specify how a member is expelled from the partnership.

Strategy rules pertain to the underlying purposes of the collaborative organization in terms of what it will do and specify how it aims to acquire the resources needed to accomplish these tasks (e.g., its clients, products, goods, services, etc.). They specify the problem or set of problems that are within the domain of the collaborative organization. More importantly, the strategy represents a shared definition of what these problems are that shape collective action among the organization's members. Strategy rules also specify what responses to these problems are considered legitimate or illegitimate; in other words, what the role of the collaborative organization is in addressing the problem. For example, the collaborative organization may decide that is will play the role of educator and information provider. While it may provide information to help inform a policy debate, lobbying on behalf of a specific position is viewed as inappropriate. Strategy rules may also define the relationship of the collaborative organization to some other organizational entity within the interorganizational network. For example, some collaborative organizations have been delegated the ability to make binding decisions or deliver services on behalf of another organization (Koontz, et al. 2004). Others advise government agencies, audit decision processes, provide information to network members, or even serve as a member in another collaborative organization (Edelenbos and Klijn 2005, 421, 432). Thus, strategy rules help define the boundaries and constraints on the design of the collaborative organization's core processes. The strategy rules also help define the parameters associated with how the collaborative organization's resources will be acquired and allocated.

While the member and strategy rules interact to create the boundaries of the collaborative organization, the *decision rules* shape the processes by which the organizational members make decisions and form rules. Interactive decision making processes are not self-executing and there are a multitude of ways to design a process. At the earliest stages of creating a collaborative organization, a person (or organization) may be assigned to manage the interactive process. In many cases, this might be the champion or founding organizational members. The importance of well managed process should not be underestimated (Imperial and Hennessey 2000). There is a constant interplay between process management and the decision rules until agreement emerges on the substance, participation and rules of the game associated with the process (Edelenbos and Klijn 2005, 426). In some cases, the group initiating the interorganizational relationships and crafting the original agreement with respect to the boundary and decision rules is actually quite distinct from the group in charge of implementing the agreement and undertaking the decision process (Sobrero and Schrader 1998, 586). In these instances, the boundary and decision rules may undergo further modification once the members begin interacting to implement the agreements.

During the initial stages of an organization, the decision rules are likely to be highly informal with consensus decision making as a norm but simple preference aggregation rules like majority voting serving to resolve impasses or gauge the level of support. Over time, the decision rules are likely to grow in complexity and specificity. One of the most important types of decision rules pertains to *preference aggregation* or the means by which the collaborative organization actually makes a decision. Collaborative organizations often, but not always, rely on consensus rules to make decisions about priorities, plans, and activities particularly during their formative stages (Bardach 1998). Consensus has also been described as a valuable means to develop a shared vision and spur cooperative action, but it also may lead to "least common denominator" decisions that are ineffective (Leach & Pelkey 2001; Coglianese 1999). However, as the collaborative organization grows in complexity, voting procedures are often employed as a back-up in case consensus is difficult to achieve to reduce transaction costs and make organizational decision making more reliable and reproducible.

As the structure within the organization becomes specialized and differentiated there is often growing complexity in the decision rule structure. There may be a *distribution of power* within the collaborative organization (e.g., voting or nonvoting members). Another common form of distributing power is by creating a governing board or executive committee to concentrate power and decision authority in order to simplify some forms of organizational decision making. There may also be a *distribution of roles or responsibilities* among members (e.g., establishing officers, sub-committee membership, etc.). As organization sub-units are created (e.g., a work group or sub-committees), rules will have to be crafted that determine the membership and strategy of the sub-unit and specify their decision rules and relationship to the larger organization. There may also be a *distribution of participation* in organizational decision making. One way to examine the distribution is by examining width and depth of participation in decisions. Width is the degree to which each member of the collaborative organization is afforded the opportunity to participate in each decision. Depth is the degree to which the participants have the opportunity to determine the final outcome of the process (Edelenbos and Klijn 2005, 428). For example, input could range from informing, consulting, advising, co-producing, to co-deciding depending on how the process is designed (Edelenbos and Klijn 2005, 429). As a result, some decisions might require greater agreement among the members than others. For example, a change to the by-laws, adoption of the budget, or expelling a member might require a super majority. Other issues might be handled by the executive board or a sub-committee and members have little input to the decision other than by monitoring the actions of this sub-set of organizational members.

As the organization evolves, these preference aggregation rules typically give rise to a more structured set of *coordination rules* that define the mutual exchange of rights among the parties involved in the relationship (Sobrero and Schrader 1998, 586 - 587). *Exchange rules* set up the operating procedures to govern exchanges of resources between the member and the collaborative organization. Essentially, the exchange rules specify the rights, duties, obligations, and expectations of benefits associated with membership, some of which might entail significant departures from their normal behavior outside of the partnership. Exchange rules are important because participation in a collaborative organization is typically voluntary and there are costs associated with participating in developing this new organizational form. Thus, exchange rules align incentives or disincentives in a manner that encourages sustained participation (Sobrero and Schrader 1998, 590). However, not all organizational members follow through on their commitments. They may fail to attend meetings regularly, fail to commit agreed upon resources (time, money, information), or act in ways that fail to advance the strategy of the collaborative organization. Thus, *monitoring rules* may be created to help govern

the exchange process and ensure that members follow through on their commitments. Conflicts that occur among members may be resolved through *dispute resolution rules* that specify the process used to resolve conflicts within the collaborative organization (Sobrero and Schrader 1998, 587). *Enforcement rules* could even be created that apply sanctions to members in the case of noncompliance with other rules (e.g., suspend voting privileges, fines, expulsion, etc.). However, a great deal of enforcement arises simply from the social norms and peer pressure that develop through the monitoring processes.

We expect that as the collaborative organizations evolve, their rules structures will become institutionalized to improve reliability, accountability, and reproducibility. We therefore expect that the formalization of rules will strengthen the institutionalization process and further enhance reliability, accountability, and reproducibility. The institutionalization and increasing formality of the collaborative organization's structure should also help improve its legitimacy among network members, which helps further its chances for survival. Finally, as the collaborative organization grows in membership it will become increasingly difficult to govern relationships within the partnership using informal rules and social norms. Moreover, as the organizational complexity of the collaborative organization increases in complexity (e.g., of the rule structure increases, it will become increasingly necessary to have a formal set of rules in order to maintain reliability, accountability, and reproducibility. Collectively, this suggests the following propositions:

P_6: Collaborative organizations that have formal rules are more likely to survive than collaborative organizations that rely on informal rules.
P_7: As a collaborative organization increases the scope of its membership, it is more likely to have formal rules than if it has a small membership.
P_8: As a collaborative organization increases the complexity of its membership, strategy, decision, and coordination rule structures, it is more likely survive if it formalizes these rules than if it relies on informal rules and norms.

None of this is meant to imply that all or even most of the rules noted above will be codified into some formal document like a set of by-laws. Informal rules and social norms that are embodied in various organizational routines are likely to play an important role even in organizations with a highly formalized set of rules. Rather, the argument is that there will be an increasing level of formality associated with the age and complexity of the organizational structures.

The "Liability of Newness"

As Stinchombe (1965) points out, new organizations typically rely on the cooperation of strangers. It takes time for the organization to develop routines. Members learn by doing and comparing alternatives and consequences. It takes time for members to develop shared norms and trust as well as the formal and informal rules used to structure organizational activities in a manner that is reliable, accountable, and reproducible. The process of external legitimation also takes time but is extremely important to the survival of any collaborative organization (Hannan and Freeman 1984, 158). All collaborative organizations must have some minimum level of external legitimacy if they are to mobilize sufficient resources to survive. In the case of watershed partnerships, this may mean public or political support (e.g., politicians, stakeholders, or the general public) that encourages potential member organizations to join and contribute resources to the new collaborative organization. Potential organizational members must also view the collaborative organization as being a legitimate response to some watershed problem or they may allocate resources to competing organizational, market, or network-based

responses or chose to develop their own response to the threat or opportunity. Developing external legitimacy is often a critical problem for younger organizations. As organizations grow older, they are more likely to develop stronger exchange relationships, become part of the power hierarchy, and have their actions endorsed by powerful actors in the network. Thus, older organizations are likely to be viewed as being more legitimate than younger organizations (Singh, et al. 1986, 173).

Therefore, it is common to find that new organizations suffer from what has been termed a "liability of newness" (Stinchombe 1965; Singh, et al. 1986; Hannan and Freeman 1984). Simply put, young organizations have a higher propensity to die than older organizations. Empirical studies provide relatively consistent support for this basic proposition in different organizational (e.g., Amburgey, et al. 1993; Bruderl & Schussler 1990; Gray & Ariss 1985; Singh, et al. 1986; Freeman, et al. 1983) and network settings (Koka, et al. 2006; Burt 2002). Therefore, it is reasonable to extend the proposition to collaborative organizations by assuming that suffer a similar liability of newness. There is some evidence to suggest this is the case. New collaborative organizations often experience growing pains and can be overwhelmed by the effort required to develop and maintain the organization (Imperial & Hennessey 2000; Bardach 1998; Bonnell & Koontz 2007). The costs associated with developing these new collaborative organizations may actually be high when compared to the costs of other governance mechanisms such as networks, markets, or other forms of hierarchy such as a single organization taking on the new responsibilities (Hannan and Freeman 1984).

The basic theoretical argument is that organizations with high reliability, low variance in performance, high accountability, and a high ability to account rationally for organizational actions are favored by selection processes in organizational populations. One requirement of reliability and accountability is that the organizational structure is highly reproducible. However, this high reproducibility and relatively stable structures creates strong inertia, which makes these structures favored by selection processes. Since both sets of factors increase with an organization's age, older organizations generally have lower death rates (Singh, et al. 1986, 588; Hannan and Freeman, 1984, 152 - 157). Therefore, while all collaborative organizations have some risk of death, younger organizations have a higher risk that declines with age.

The liability of newness arises from a combination of internal and external organizational processes. External factors such as legitimacy can serve to decrease the death rate. Thus, one way younger collaborative organizations can help attenuate their "liability of newness" is by acquiring legitimacy from outside actors (Singh, et al. 1986, 189). They may also adopt other changes to the organizational structure that serve to enhance organizational legitimacy (e.g., adding new partners, adopting a formal structure, etc.) (Singh, et al. 1986, 590; Meyer and Rowan 1977; DiMaggio and Powell 1983).

On the other hand, fundamental changes in the internal processes of a collaborative organization such as revisions in established routines, communication patterns, reshuffling work groups, hiring new employees to staff the organization, changing organizational leadership, changing the individuals representing the members, and most importantly adding entirely new partners can reduce the reliability of performance to that of a new organization. Essentially, the argument is that fundamental changes in these internal processes rob the organization of its history and resets the liability of newness clock back to zero (Amburgey, et al. 1999, 53; Singh, et al. 1986, 589; Hannan and Freeman 1984, 160). Fundamental reorganizations could therefore increase the death rate of collaborative organizations when they occur during the early life-cycle stages (Singh, et al. 1986, 606).

However, the literature is less clear on the relationship between organizational change and death rates. The net effects appear to depend on time. The change may ultimately prove to be adaptive but only after enough time passes to repair the problems the collaborative organization incurs as a result of the disruptive aspect of the changes (Amburgey, et al. 1999, 53; Hannan and Freeman 1984, 159). Over time, organizations may develop "modification routines" or procedures for changing and creating new operating routines. But in order to routinize the change process the organization must gain experience by changing – organizations learn to change by changing. This suggests that the types of changes experienced in the past are more likely to be repeated in the future. It also suggests that the more experience an organization has with a particular type of change, the more likely its members will view it as a solution to a broader set of challenges or problems (Amburgey, et al. 1999, 54). Therefore, the probability of an organizational change increases with the number of prior changes that are of the same type (Amburgey, et al. 1999, 55).

Collectively, the theory of the liability of newness suggests several propositions related to the ability of a collaborative organization to survive:

- P_9: Older collaborative organizations are likely to be viewed by members of the interorganizational network as more legitimate than younger collaborative organizations.
- P_{10}: Collaborative organizations with formal rules structures are likely to be viewed by members of the interorganizational networks as more legitimate than collaborative organizations that rely on informal rule structures
- P_{11}: Collaborative organizations with higher levels of legitimacy are more likely to survive than collaborative organizations will low levels of legitimacy.
- P_{11}: Young collaborative organizations that acquire high legitimacy by adopting formal rules or by other means will have a higher rate of survival than those with low legitimacy.
- P_{12}: Younger collaborative organizations that make major changes to their membership, strategy, decision, and coordination rule structures will increase their risk of death.
- P_{13}: Older collaborative organizations that make major changes to their membership, strategy, decision, and coordination rule structures increase their risk of death to the risk associated with a younger organization.

Implications and Directions for Future Research

One of the most important contributions of this paper is to draw attention to the fact that there are important differences between networks and organizations (i.e., hierarchy) as governance forms. Markets constitute the third basic form of governing relations between individuals and organizations (Powell 1990). Governance refers here to the means for achieving direction, control, and coordination of individuals and organizations with varying degrees of autonomy in order to advance joint objectives (Lynn, Heinrich, & Hill, 2000; Frederickson, 1996). The distinction between networks and organizations is often missing in the watershed governance literature. Sometimes what are referred to as partnerships are really some form of collaboration taking place in a network process governed trust and relationships guided by formal and informal rules and social norms. Network actors are generally autonomous and there are typically few hierarchical differences among actors within the relationship even if these differences exist outside the relationship.

A collaborative organization is a different governance form based on a hierarchical form of organization. It shares attributes of the network form in that trust and relationships are often used to craft rules and social norms that structure relations among members of the collaborative organization. However, collaborative organizations have an organizational structure that is used to govern collective action among members. Membership carries certain rights, duties, and responsibilities that exist inside of the relationship that might not exist outside of it.

Collaborative organizations also enhance the governance of a watershed's interorganizational network by connecting a subset of network members in an ongoing set of stable interactions repeated over long periods of time. This promotes the development of strong social networks, cooperation, and, perhaps most importantly, norms of trust, reciprocity, and cooperation (Milward & Provan 2000; Axelrod 1997, 1984; Ostrom, et al. 1994; Ostrom 1990; Aldrich & Whetten 1981). This social capital can then be utilized to help facilitate other network processes (e.g., collaborative activities) designed to enhance watershed governance.

Collaborative organizations may also operate as a hub within the larger interorganizational network associated with watershed governance. As such, they can play an important role in orchestrating activity within the network. Orchestration tasks within the network might include mobilizing and disseminating dispersed knowledge and creating stability in the interactions among network actors (Dhanararaj and Parkhe 2006). By acting as a hub of interaction within the network, the collaborative organization promotes multiplexity by increasing the connections among network members (Dhanararaj and Parkhe 2006; Kim, et al. 2006; Scott, 1991). Such ties are stronger than a single link because the relationship is maintained when one of the links is broken (Provan & Milward, 2001; Aldrich and Whetten, 1981).Collaborative organizations might also create a forum for making collective decisions that are subsequently used to achieve direction, control, and coordination of the organizations within the interorganizational network (Imperial 2005a).

The stable interactions may also promote a particular form of organizational learning by the members of a collaborative organization that has been termed "collaborative know how" (Simonin 1997). The argument is that network members learn how to govern collaborative processes and find ways to reduce the transaction costs associated with joint activities by participating in these activities (Dyer & Singh 1998; Kraatz 1998; Park 1996). Members within the partnership are then free to utilize these lessons to improve the management other collaborative activities outside the partnership.

We also demonstrate that the organizational approach to studying collaborative organizations (e.g., watershed partnerships) provides a means of systematically examining, comparing, and contrasting their structures. The propositions advanced in this paper advance our understanding of the structural properties of collaborative organizations that promote stability or inertia. Rather than be viewed as problematic, inertia is often the by-product of a well managed collaborative organization.

The ability for watershed partnerships (i.e., collaborative organizations) to endure over long time periods is important if they are to address watershed problems in significant ways. Many watershed problems are the result of the "tyranny of small decisions" in that they form by a large number of small decisions and actions. Such projects are too limited in scope, scale, magnitude or duration to significantly reduce the watershed problems. Addressing watershed problems like habitat restoration and reducing nonpoint source pollution often requires a sustained effort amounting to a small number of positive actions taken over long time periods. Many of these actions require collaborative action at the operational and policy making levels.

Collaborative organizations become the vehicle for encouraging, coordinating, and facilitating collaborative activity over these longer time periods (Imperial 2005a, 2004; Imperial and Hennessey 2000).

Our propositions also draw attention to how these structural features are related to a collaborative organization's life-cycle and its ability to endure the test of time while drawing attention to the important challenges confronting managers seeking to develop a collaborative organization. Thus, the paper helps reduce the knowledge gap associated with understanding how the management of collaborative processes differs from that if single organizations (Agranoff & McGuire, 2001; Jones, Hesterly, & Borgatti, 1997; Mandell, 1990). An important part of this knowledge gap relates to the evolution of collaborative organizations. Just as the architect needs to understand what makes a building stay up rather than fall down, it is important for the collaborative public manager to understand the elementary processes by which collaborative organizations form and develop (Koka, et al. 2006). The challenges and problems confronting the management of a collaborative organization will change over time. Thus, much needs to be learned about the management of collaborative organizations. For example, are the managerial strategies effective during early life-cycle stages inappropriate during latter stages? Are some strategies more effective in some organizational structures than others? Conversely, do some structures constrain the use of some strategies?

Finally, our theoretical framework has significant implications for researchers because it suggests several sources of potential bias (Kim, et al. 2006, 705). Collaboration research tends to focus on activities that have some record of achievement. Network researchers tend to examine organizations that have formed partnerships successfully. Watershed researchers tend to focus on partnerships that have been formed successfully or have lasted for some prescribed period of time. This bias towards functionality must be balanced by and equally strong focus on the dysfunctional aspect of these processes by understanding why some collaboration efforts, networks, and watershed partnerships often fail to get off the ground or die during the early stages of their existence. Moreover, the failure to understand and analyze the organizational features of a watershed partnership in a systematic manner will confound theory development and make it hard to aggregate findings from different studies. Similarly, researchers need to consider the life-cycle stage of the partnership because it will influence the nature of the relationships among its members and may produce different measures of organizational effectiveness.

While much work remains to be done to test, modify, and refine our theoretical framework and associated propositions, we believe it contributes to the development of our understanding of the organizational dynamics of watershed partnerships. We also believe that the life-cycle stages and related propositions provide a means of systematically identifying the structural properties that help collaborative organizations to endure and survive over long time periods.

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