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## Article

# Managing networks as learning organizations in the public sector

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# **Managing Networks as Learning Organizations in the Public Sector**

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## Abstract

This paper addresses the increasing use of network forms of governance and the challenges would-be network managers confront, including the persistent need network structures create to secure a modicum of internal goal alignment among participating members, the difficulty of establishing and maintaining trust among collaborating organizational representatives, and the problematic of ensuring alignment of internal and external accountability claims in inter-organizational and often multi-sectoral collaboratives. The paper reviews the literature and discusses the significance of communication management within network arrangements, including the role of technology for effective communication and subsequent coordination efforts. It concludes by arguing that networks are de facto distributed environments and working across them requires developing learning strategies to enhance member capacities to work collaboratively to address common concerns.

**Keywords:** collaboration, inter-organizational relationships, network management, strategic alignment, learning organizations

## Introduction

This article addresses the sea change in the nature of public governance, from a structure that emphasized hierarchical public institutions that typically assumed lone responsibility for service delivery to one that finds those organizations now engaged in networked environments and whose institutional forms are changing accordingly. With this massive modification in structure and behavior, governments around the world do less directly and supervise more, and their employees now often oversee complex relationships, rather than themselves delivering services. This paper sketches the factors essential to ensure the successful development and operation of these complex organizational structures. It also charts some steps global democratic leaders may need to take to ensure their populations understand the change network governance portends for how the public's work is accomplished and for what it may require to address it in this way.

The ongoing effects of the growing complexity of many public concerns, rapid globalization, new technologies, and widespread adoption of neo-liberal tenets of governance are changing how governments function. The sheer intricacy of many public concerns has also occasioned a certain modesty among government leaders; individual public organizations are unlikely to possess the knowledge and

wherewithal to address them alone. Accordingly, public decision-makers are turning to numerous stakeholders, including for-profit and nonprofit institutions, to assist as they seek to respond to these concerns, increasingly employing network structures to address complex public issues (Agranoff, 2007; Agranoff & McGuire, 2003). Simply put, the spread of the neo-liberal approach to governance since the early 1980s too has encouraged widespread adoption of network forms of governance. This view embraces markets as a primary force in organizing society and calls for small government whenever feasible. It also urges public leaders to employ markets even when governments act to address social problems. The result of broad acceptance of this philosophy around the world, when coupled with rapid globalization and more sophisticated technology, has resulted in governments now working through and with social intermediaries to accomplish their aims and, as they do, the character of their own organizational structures is shifting rapidly as well. As Goldsmith and Eggers (2004) have observed, “Rigid bureaucratic systems that operate with command-and-control procedures, narrow work restrictions, and inward-looking cultures and operational models are particularly ill-suited to addressing problems that often transcend organizational boundaries” (p. 7).

Milward and Provan (2006) have argued governments have turned to collaborative networks because they “are seen as appropriate devices to tackle public management problems like homelessness, child welfare, and terrorism” (p. 8). From a public sector perspective, Goldsmith and Eggers (2004) have claimed four influential global trends have led to the development of network organizations: third-party government (private firms and nonprofit organizations (NPOs) helping to deliver public services and fulfill policy goals), joined-up government (multiple government agencies and levels joining together to provide integrated service), the digital revolution, and consumer demand. According to Brinkerhoff (2002), these particular movements “necessitate and facilitate partnership approaches. The recognition of interdependencies, and even associated conflict, assists previously disparate actors in finding common ground and shared concerns” (p. 176).

These trends have shaped the private, public, and third sectors. Businesses and industries began to establish network arrangements more noticeably in the 1980s as global trade and competition rose and technologies became more sophisticated (Miles & Snow, 1992). Technology, in particular, has rearranged the working landscape and altered the decision-making process. “Electronic communication technologies are enablers of changed forms by offering capabilities to overcome constraints on time and distance, key barriers around which organizational forms traditionally have been designed” (Fulk & DeSanctis, 1995, p. 337). Instead of network managers relying on slower technology, such as voicemails or facsimiles, to obtain information in order to make decisions, they now have a range of information technologies (IT)

and rapid communication devices to bring all collaborative members together to work on a document or discuss an issue, such as groupware or videoconferencing, respectively. By employing appropriate technology, networks allow members to share information quickly, have convenient access to each member's expertise, and generate synergism.

Network organizations, like hierarchies and markets, are coordinating mechanisms. Hierarchies rely on rules and order to secure their ends. Markets employ price competition to ensure cooperation. Networks, meanwhile, develop trust and cooperation to obtain their aims (Powell, 1990; Rhodes, 2003, p. 61). These characteristics allow members to retain a measure of independence without resorting to hierarchical structures or claims. Scott (1998) has argued hierarchical structures suffocate "free interactions that can result in error correction, by undermining the social support necessary to encourage all participants to propose solutions, and by reducing incentives for participants to search for solutions" (p. 161). Scott (1998) has also suggested network forms "entail more enduring and diffuse connections than markets, but more reciprocal and egalitarian arrangements than hierarchies" (p. 276). But, these network relationships have been too little studied to date. Kilduff and Tsai (2003), for example, have raised important questions concerning the origins and sustenance of reciprocal (trusting) relationships:

Why are some ties regarded as trustworthy by some actors but not by others? Are there predictable biases in the perceptions of network ties on the part of those involved in such ties, and on the part of observers? ... These kinds of questions have yet to be answered, but could inform us concerning the trust-based governance systems that substitute for formal legal ties in and between organizations (p. 129).

While the full impact of the role of trust for operations may be too little understood, network organizations typically share some common characteristics: permanent status, communication system, informally identified governance structure, and coordination system (e.g., work groups, division of labor) (Agranoff, 2007, p. 7; Rhodes, 2003, p. 63). The following definition of networks is used here:

Structures, formal or informal, made up of individuals representing varied organizations who work collaboratively to exchange information and/or resources, sometimes to solve problems, to take action on issues, and/or to set certain agendas.

This definition emphasizes relationships among participants and their roles in facilitating shared strategies and meanings.

The development of communication and coordination systems is vital to establishing and maintaining these relationships as well as to successful functioning of networks. These systems not only ensure the appropriate aggregation of information, but also build working relationships among network members. As Agranoff (2007) has remarked, “The individual information-sharing dimension of each network activity also cements relationships in a very subtle way” (p. 122). Given this reality, network managers should construct these systems carefully to make certain the technology is available to all members, has the requisite capacity and security, and is user friendly to encourage the potential for exchange and learning. According to Bryant (2003), “Technology has a complex impact on social interaction within a group as well as inhibiting the processes that it might be expected to enhance” (pp. 38-39). Technology, for instance, may increase member contacts and the speed at which information is transferred and processed. At the same time, it may also reduce the types of interaction needed to enhance creativity within the group. It may also limit network members’ capacity to articulate or manifest tacit knowledge. When network members accept and use common IT, such efforts can streamline communication and facilitate coordination (Dewett & Jones, 2001, p. 334).

This article first reviews the literature and then discusses the benefits of network structures. Under the discussion section, the article offers guidelines and suggestions for creating and maintaining networks. It concludes by arguing that networks are de facto distributed environments and working across them requires developing learning strategies to enhance member capacities to work collaboratively to address common concerns within the public sector.

## **LITERATURE REVIEW**

Prior to 1990, sociologists and scholars in related fields certainly discussed network forms, but the term “network” had not yet acquired pride of place in such arguments. Instead, researchers often used other words, including groups, associations, informal organizations, linkages, collaborations, and inter-organizational systems, to describe network configurations. A few scholars in the 1960s laid the groundwork for research on such structures with work on organizational linkages. Parsons (1960), for example, investigated the relationships between organizations’ external environments and their internal structures. He pointed to the significance of the roles of individuals and power within groups as well as with the impact of primary external stakeholders for organizational life and service delivery processes and outcomes. These same issues emerged as central in the study of networks nearly fifty years later. Additionally, Litwak and Meyer (1966) examined the communication strategies used by bureaucratic

organizations to persuade external primary groups to support their activities; they focused on the import of these relationships for reaching organizational goals and concluded “bureaucracy should be neither isolated from primary groups nor brought too closely in contact with them” (p. 58). Like Parsons before them, these authors emphasized the importance of external linkages when studying network forms.

Much of the early work concerning network organizations from sociology eventually made its way into the organizational management literature. Sociologists first researched group interactions at a micro-level without taking that knowledge and applying it on a macro-scale. Granovetter (1973) broke new ground with his examination of strong and weak ties within small groups and communities: he argued “the analysis of processes in interpersonal networks provides the most fruitful micro-macro bridge” (p. 1360). He suggested strong ties developed within network structures, whereas weak ties were most often associated with members’ connections to individuals and entities outside their organizations. He asserted weak ties acted as “bridges” to the world. Information within groups could reach more people if weak ties were used to do so. Meanwhile, if strong ties were employed, information was likely to remain confined to individuals and groups within the constellation of already existing associations. The reverse was also true. Through weak ties, new information entered networks: “those to whom we are weakly tied are more likely to move in circles different from our own and will thus have access to information different from that which we receive” (Granovetter, 1973, p. 1371).

Granovetter highlighted the significance of trust and leadership when explaining weak ties. He contended people could trust leaders whom they did not personally know if they knew others who had closer, positive ties to those individuals. If they trusted the person providing the information, they were more likely to believe and trust those leaders. These weak ties could not only give leaders a wider reach, but also enhance their credibility. Granovetter (1973) found that “reducing drastically the number of paths from any leader to his potential followers would inhibit trust in such leaders” (p. 1374).

With modern technology, network managers may easily expand the boundaries of their groups. Collaborators can simply search the Internet to find experts to address questions that they cannot tackle themselves. This strategy is known as knowledge leveraging, “the sharing and integrating of expertise within a team or partnership through real-time, interconnected IT” (Dewett & Jones, 2001, p. 327). Reaching outside for information has the possibility of re-energizing members and sparking new ideas. Knowledge leveraging is an outcome of network adoption of appropriate technology. It occurs “when relationships among electronically connected people or firms produce new and/or qualitatively different communication that yields product or process innovation (Ring & Van de Ven, 1994)” (Dewett & Jones,

2001, p. 322). On the other hand, managers must be alert to the need of prescreening any information acquired through virtual weak ties. Dewett and Jones (2001) have suggested “forming distinct on-line communities” to ensure reliable information (p. 322).

Three other scholars have produced especially important work aimed at exploring the purport of strong and weak ties since Granovetter first identified their significance. Cook (1977) has argued network structures should be conceived as open systems because of their exchanges with other organizations and that those relationships form as a result of “specialization and scarcity” (p. 64). By increasing specialized knowledge, production and resources through these relationships, organization leaders are able more effectively to stabilize their environments than they could manage single-handedly. But, ties confer power on some actors and not others. Similarly, technology can also present some network members more opportunities for acquiring power than others. Network participants who have organizational cultures that support information sharing, have invested resources into and promote the use of new technologies, and have experts available to evaluate the usefulness of shared information are more likely to benefit from communication technologies (Starling, 2010, pp. 549-550). And, those who accrue such standing and power tend to become central figures in network decision-making and dynamics.

Thorelli (1986) has asked why the ties that underpin networks form in the first instance and has suggested they arise due to overlaps in organizational mission linked to one or more of five domains: product (or service); clientele; functions; territory; and time; if all of these domains overlap, “head-on competition” rather than networks results (p. 39). Related, Chisholm has argued that organizational relationships develop to reduce environmental uncertainty by offering members sought-after resources and information in their attempts to solve complex problems. In this view, networks are “interdependent” with their environment and should be studied as open systems (Chisholm, 1989, p. 42). Members who provide needed skills, competencies or resources to the group that complement, but are different from other members’ capacities, are most likely to claim positions of power within collaborative efforts.

Chisholm (1989) has contended power derives not only from capacity differences, but also from an “individual’s formal position within the organization, and one’s personality and attitudes” (p. 132). Thus, network managers must daily seek to maintain relationships as well as achieve a balance among the varying backgrounds of those with whom they must interact across the network. Yet, even relatively powerful managers’ decision-making skills are limited:

Limitations of intellectual ability, time, and other scarce resources prevent the decision maker from comprehensively evaluating all or even most possible goals, or if goals are fixed, from evaluating all possible alternatives for achieving those goals. The decision maker is therefore constrained to make most decisions at the margin and to limit substantially the range of alternatives considered (Chisholm, 1989, p. 163).

Nonetheless, centrally situated or “lead” managers are responsible for securing cooperation across organizations that is essential to network success. Most stakeholders involved in network arrangements expect such managers to catalyze and shape group interactions and to suggest any changes needed in the structure. As a result, network managers particularly must engage in “consensus building, responsibility charting, conflict management, team building” (Agranoff & McGuire, 1999, p. 31). To address these responsibilities, network managers must constantly decide when to emphasize their organizations’ relative operating autonomy versus taking steps to encourage and deepen the relationships necessary to ensure the trust and cooperation required to maintain ties across the network.

Thompson (2003) has emphasized the significance of robust ties among network principals: “Cooperative networks thrive on communication and information flows between their members” (p. 115). IT may enhance group effectiveness in information gathering and decision-making processes. Dewett and Jones (2001) have referred to information technology as “a moderator of the relationship between organizational characteristics [such as structure, learning, and interorganizational relationships] and several organizational outcomes, most importantly, efficiency and innovation” (p. 314).

By the mid-1990s, scholars gradually began to explore the issue of network failure. For example, O’Toole (1995) argued networks could fail when members’ headquarters’ structures made coordination difficult or incentives to cooperate were less powerful than those to act autonomously (p. 45). Another reason for failure, when collaboratives involve nonprofit organizations, occurs when, “The power of networks has been limited by their inability to appropriate economic surpluses in order to form higher levels of association which are able to interface on a par with governments and businesses” (Fowler, 1997, p. 233). Networks also fail when they do not create productive communication and coordination systems. Without continuous information sharing and appropriate utilization of IT, networks cannot create a culture that supports collaboration and innovation.

Research concerning the relationship between network culture and effective management first appeared in the late 1990s in sociology and policy studies. These analyses found that network managers



must take member organizational cultures into account when designing initiatives aimed at building cooperation among members. They must develop mechanisms to secure and constantly ensure communication among participants (Child & Faulkner, 1998, p. 250), not only to overcome the inertia represented by organizational cultures, but also to cultivate the shared understanding necessary to effective network functioning. Child and Faulkner (1998) have highlighted three essential management skills needed to produce a positive and cooperative network culture: continuous flow of resources, information, and “mutual expectations and evaluations” (p. 344). On the other hand, network cultures, like their organizational counterparts, may have detrimental effects when they evidence “group think” or work to prevent change or suppress innovation.

Castells (2000) has argued “reconciliation of culture and technology” is essential to generate knowledge within networks” (p. 453). Thus, managers need to employ technology to encourage and organize systematically their networks’ “intellectual capital and to foster a culture of continuous learning and knowledge sharing” (Starling, 2010, p. 548). A network’s culture will determine the role and impact of technologies used to facilitate sharing and learning. This may entail some formalization to reduce any undue ambiguity of information shared, a task for which IT is well suited. Information technology “facilitates the recording and retrieval of information about organizational events and activities making the control of behaviors and processes through formalization more viable (Huber, 1990)” (Dewett & Jones, 2001, p. 329). Additionally, technology, such as e-mails and websites, not only transfer and disseminate information, but also “can help promote the cultural shared norms, values, and expectations that can facilitate support for efficiency or innovation” (Dewett & Jones, 2001, pp. 332-333).

Podolny and Page (1998) have argued network cultures, unlike markets and hierarchies, are “characterized by a distinct ethic or value-orientation on the part of exchange partners” (p. 60). When members develop shared aims, they often rely on moral codes to produce group expectations of trust and cooperation. Moral codes, “ethics or values arising within the network, underpin the guiding principle of networks which is a norm of reciprocity” (Podolny & Page, 1998, p. 60). Give-and-take among otherwise formally equal partners is expected within network organizational forms.

Both O’Toole and Scott have argued the reality of public administration or management, now increasingly dependent on network structures for its success, require fresh evaluation. These scholars have suggested managers and analysts alike should devise new ideas and strategies for networks instead of implicitly relying on their understanding of hierarchies to guide their assessments and actions. As O’Toole (1997) has observed, “action guided by the hierarchy assumption is likely to lead not just to



ineffectual but to counterproductive outcomes” (p. 47). Less than a year later, Scott (1998) similarly contended,

To shift from more vertical to more horizontal arrangements requires changes in performance measures, incentives, job descriptions, reporting relations, information systems, and career incentives, to name only the most relevant factors. ... Managers need to be generalists rather than trained as narrow specialists; and there must be incentives for learning and for exposing errors. However, what is needed and what is available are not always the same. It does not appear that such conditions are present in most employment settings at the present time (p. 282).

Beginning in the first decade of the century, increasing numbers of researchers began to focus on the challenges implicit in network forms of governance. O’Toole and Meier (2004) have expressed concern that managers may “respond to the stronger and more politically powerful elements of the surroundings, thus magnifying the tendency toward inequality” and network structures themselves may serve as vehicles for authorities to avoid “difficult or costly responsibilities” (pp. 681-683). Additionally, difficult questions have been raised concerning so-called “dark networks,” including criminal and terrorist organizations. These include the following: How do they differ from other network configurations? How do moral codes apply to these organizational forms? How can researchers adequately study such networks without compromising their own ethics? Other barriers to network effectiveness include the development of undue dependency among members (Beeby & Booth, 2000), turf protection due to competitiveness (Beeby & Booth, 2000; Linden, 2002), and lack of trust among participants (Linden, 2002). These may be significant for all forms of network governance and not simply for criminal institutions.

In addition, scholars have begun to provide details regarding skills, strategies, and tasks that managers must possess and practice to form and maintain networks. Several analysts (Agranoff, 2006; Creech & Willard, 2001; Ehin, 2004; Kilduff & Tsai, 2003; Perkin & Court, 2005; Thompson, 2003) have sought to study relationships among network members, while also examining their external connections. These researchers have focused intensely on the concepts of embeddedness, density, and centrality to understand transaction patterns, number of ties among participants, and positioning of members. Friedkin (2001) has employed social influence network theory to describe how network principals alter their perspectives as they modify their positions and ties; “the pattern of network ties indicates channels of interpersonal influence, the centrality of a person’s position in the network structure indicates the person’s power and susceptibility to influence, and the similarity of network relations indicates shared social positions” (pp. 173-174). However, researchers have not yet explored fully when specific strategies

should be employed to foster network effectiveness, when particular tasks should be initiated or how selected strategies and tasks affect member relations within collaboratives. For now, at least, these concerns remain the province of managerial judgments.

Accordingly, managers must seek not only to understand internal relations, but also to decipher what relationships those with whom they interact have outside their immediate organization to understand the potential and impacts of those connections for their group. Ehin (2004) has sketched the effects of members' external connections via an application of chaos theory:

Chaos theory stipulates that a system (person or group) is unpredictable and bounded at the same time. Hence, such a configuration never attains true equilibrium since it is very sensitive to small disturbances all the time or is never precisely in the same place twice. Concurrently, the system never goes beyond certain margins. It has a self-reference to which it ceaselessly returns (p. 77).

For network organizations that reference is the interdependence of members.

Researchers have made great strides in charting the complexities of this new organizational universe and are now seeking to theorize the intricacies they have assayed. Whatever their approach, however, scholars have all stressed the critical importance of individual leaders and managers to the success of network forms of governance. These individuals must not only understand and manage dynamics within their own organizations, but they must also now consider how their own institutions' interdependence with other units may be nurtured in order to secure sufficient incentives to elicit cooperation and, thereby, effective implementation of public services or aims.

## **DISCUSSION**

Scholars have suggested network structures offer numerous potential benefits for participating organizations, including:

- Increased capacity (Agranoff, 2007, p. 222; Beeby & Booth, 2000, p. 77; Child & Faulkner, 1998, p. 114; Dewett & Jones, 2001, p. 316);
- Flexibility (Child & Faulkner, 1998, p. 114; Goldsmith & Eggers, 2004, p. 28; Landau, 1991, p. 7; Scott, 1998, p. 209);

- Increased responsiveness (Beeby & Booth, 2000, p. 77; Child & Faulkner, 1998, p. 115; Goldsmith & Eggers, 2004, p. 28; Scott, 1998, p. 12); and
- Learning opportunities (Beeby & Booth, 2000; Dewett & Jones, 2001, p. 316; Linden, 2002; Vernis, Iglesias, Sanz & Saz-Carranza, 2006).

Landau (1991) has contended that networks are, of necessity, “pragmatic, goal searching, and problem-oriented” (p. 7). However, three additional potential benefits of network organizations are discussed here: their capacity to acquire resources, to provide improved organizational performance, and to encourage the development of key relationships. Networks bring together individuals whose assets/resources or capacities complement those of other members. This scenario permits participants to share essential knowledge and ideas about their common concerns (Agranoff, 2006; Agranoff, 2007; Agranoff & McGuire, 2003; Beeby & Booth, 2000; Child & Faulkner, 1998; Goldsmith & Eggers, 2004; Linden, 2002; Podolny & Page, 1998; Vernis *et al.*, 2006) as well as to develop key arguments for obtaining resources to address those issues (Agranoff, 2006; Beeby & Booth, 2000; Child & Faulkner, 1998; Kenis & Provan, 2006; Vernis *et al.*, 2006).

Network memberships generally encompass a broad range of expertise and that knowledge represents an important resource. By expanding their information base and increasing their reach, network members may be able to enhance creativity and reduce organizational costs (Dewett & Jones, 2001, p. 316; Linden, 2002, p. 7; Podolny & Page, 1998, p. 65; Starling, 2010), while identifying new opportunities.

Networks that effectively distribute knowledge may be well positioned for innovation in their members’ shared areas of interest. Self-conscious attention to knowledge sharing suggests the potential for unprecedented innovation (Dewett & Jones, 2001; Goldsmith & Eggers, 2004, p. 28; Landau, 1991, p. 7; Linden, 2002, p. 7; Kenis & Provan, 2006, p. 228; Perkin & Court, 2005, p. 2). Nonetheless, such changes typically result from an open sharing and challenging of ideas.

A willing coalition of supporters of a shared set of aspirations must emerge among stakeholders for network organizations to succeed. Shared purpose, while it is subject to constant re-negotiation, generates sufficient accord to permit network participants to act. Common aims may be established and maintained through open, interactive communication (Austin, 2000; Child & Faulkner, 1998, p. 343; Perkin & Court, 2005, p. 11). Frank dialogue reminds participants of the complexity and importance of their endeavor and pushes them to remain dedicated to their shared objectives. As members perceive such communication to

be reliable, they should become more cooperative (Child & Faulkner, 1998, p. 344; Creech & Willard, 2001, p. 35).

Several other factors contribute to generating a sense of common claim across participating organizations in networks:

- Selecting appropriate partners (Agranoff & McGuire, 1999; Austin, 2000; Bryson, Crosby & Stone, 2006; Creech & Willard, 2001; Ehin, 2004; Goldsmith & Eggers, 2004; Linden, 2002);
- Obtaining necessary and flexible resources (Child & Faulkner, 1998, p. 344; Linden, 2002, p. 187);
- Designing an appropriate structure (Bryson, Crosby & Stone, 2006, p. 52; Child & Faulkner, 1998, p. 343; Creech & Willard, 2001, p. 24);
- Developing mutually agreed-upon expectations, procedures, and rules of behavior (Agranoff & McGuire, 2003; Beyerlein, Freedman, McGee & Moran, 2003; Brinkerhoff, 2002; Bryson, Crosby & Stone, 2006; Child & Faulkner, 1998; Goldsmith & Eggers, 2004; Ehin, 2004; Kamensky, Burlin & Abramson, 2004; Linden, 2002; Thompson, 2003; Thorelli, 1986);
- Employing technologies effectively (Creech & Willard, 2001); and
- Devising a continuous learning system that converts information and understanding into action (Agranoff, 2007; Austin, 2000).

When network members purposefully design the structure and individual organizations' roles, while also developing shared performance expectations at the outset of their collaboration, they are more likely to create an effective coordination system.

IT can assist with members' efforts to secure the benefits offered by network involvement. Information technology, like network arrangements, brings diverse individuals and knowledge together. Since IT reflects how information is stored, transmitted, communicated, processed, and acted upon (Dewett & Jones, 2001, p. 326), network managers should pay close attention to such systems as they develop their coordination and communication strategies, choosing options that lend themselves to the flexibility and accessibility required of collaborations.

A third potential benefit of network involvement is the collaborative's capacity to create and nurture key relationships among participants. When successful, connections forged among network actors cultivate increased trust which, in turn, can produce an atmosphere in which information sharing is

encouraged in order to address specific challenges in achieving agreed-upon goals (Agranoff & McGuire, 1999; Child & Faulkner, 1998; O'Toole, 1995; Walker, 1997). The quality of individual relationships across organization boundaries will shape whether and how shared network goals are achieved. Trusting relationships allow participants to take actions concurrently in numerous places, increasing their opportunities to address their aims. Such ties extend the reach of individual participants. Vernis *et al.* (2006) have claimed these connections give collaborators “influential capabilities” and possibly “negotiating leverage” (pp. 28, 73). Trusting ties may allow network managers to influence not only internal processes, but also external ones.

Common goals and a shared understanding of what constitutes effective performance in the name of those aims often yields trust among network participants. According to numerous scholars (Agranoff, 2007; Agranoff & McGuire, 2003; Austin, 2000; Brinkerhoff, 2002; Child & Faulkner, 1998; Goldsmith & Eggers, 2004; Kamensky, Burlin & Abramson, 2004; Linden, 2002; Milward & Provan, 2006; Scott, 1998; Thompson, 2003), trust among network members is essential to success. Trust promotes openness and mutual respect and may foster the risk taking needed to make changes and offer alternatives to address complex issues. As trust increases, reciprocity also rises. Stakeholders, as a result, should become more at ease with each other—creating higher levels of mutual regard and confidence as well as greater potential for synergy among members—and decision-making should become more straightforward. Austin (2000) has asserted trust “knits organizations tighter and facilitates concerted action” (p. 127). As Goldsmith and Eggers (2004) have observed, “Trust is the bedrock of collaboration. Without it, people will not collaborate or share knowledge” (p. 119).

Leadership is another factor necessary for network success (Agranoff, 2007; Austin, 2000; Bryson, Crosby & Stone, 2006; Creech & Willard, 2001; Goldsmith & Eggers, 2004; Linden, 2002; Kamensky, Burlin & Abramson, 2004). Collaborative leaders support the development of knowledge, talent, resources, and other professional capabilities of those involved in addressing a common concern or shared vision (Crosby & Bryson, 2005, p. 184; Crosby, Bryson & Stone, 2006, p. 44; Luke, 1998, p. 1). Such leaders appear well suited to networks. These individuals must continuously work to nurture shared organizational aspirations and to “help each party play to its strengths” (Linden, 2002, p. 187), while offering opportunities for socialization to cultivate stronger bonds within the network.

Creech and Willard (2001) have stressed leaders of collaborative efforts must provide necessary information and persuade otherwise autonomous actors to pursue joint action (p. 42). As strategists, network managers create a road map of suitable plans and tactics to realize the goals of the collaborative

while maintaining a balance between the network's claims and their own organizational needs for autonomy (Luke, 1998). Linden (2002) has asserted such successful balancing helps "to build a broader constituency for collaboration among other stakeholders" (p. 164). In other words, group efforts allow organizational members to expand their reach and their effectiveness (Beeby & Booth, 2000, p. 76; Goldsmith & Eggers, 2004, p. 28; Perkin & Court, 2005, p. 19). As boundary spanners, collaborative leaders "have a natural or trained tendency to see *connections and possibilities* where others might see barriers or limitations" (Linden, 2002, p. 161). This capacity allows such leaders to promote their group's activities to others and gain external support while sustaining necessary internal consonance and legitimacy. They must act as system integrators and facilitators while balancing the claims of the network against those of their own units (Goldsmith & Eggers, 2004, p. 119; Linden, 2002, p. 154). Technology can enhance boundary spanning capacity by permitting "access to prior knowledge, as might result from knowledge codification" (Dewett & Jones, 2001, p. 324). With their storage capacity, technology allows members to search for and incorporate new information into their thinking and retain older information for reference.

Some scholars (Bryson, Crosby & Stone, 2006; Linden, 2002) have emphasized the importance of balancing the requirements of plans and procedures with the need for results within networks. These same researchers have also stressed the importance of individual and organizational accountability for network results. According to Bryson, Crosby, and Stone (2006), this includes demonstrating accountability for "relationships with political and professional constituencies" (p. 52). Network managers may use technology to keep their stakeholders apprised of their progress and to promote their collaborations' successes. By doing so, they may be able to make clear to network participants, not only the value of their own participation, but also the public value of their collaboration.

### *Creating Network Structures*

Analysts have created practical guidelines for deciding when network organizational forms are appropriate. It should also be noted that, these criteria notwithstanding, political leaders often mandate their use for public service delivery:

- When a diverse array of skills, resources, and information are necessary to approach issues;
- When participants value mutual exploration of ideas;
- When a team approach is likely to prove more responsive to public problems than a single organization's efforts are likely to be; and

- When creative strategies are needed (Beyerlein *et al.*, 2003, pp. 132-133).

Once a network has been created, whether voluntarily or by mandate, several steps are necessary to establish it as a functioning entity. These may be divided into three primary stages: pre-formation, formation, and execution. In the pre-formation stage, potential organizational participants choose appropriate partners (Agranoff & McGuire, 1999; Austin, 2000; Bryson, Crosby & Stone, 2006; Creech & Willard, 2001; Ehin, 2004; Goldsmith & Eggers, 2004; Linden, 2002). Selecting suitable participants is critical. Each stakeholder should bring specific required resources to the collaboration and recognize their interdependence with their other collaborators.

Next, participants must identify and agree on a shared vision or purpose (Agranoff, 2007, p. 28; Agranoff & McGuire, 1999; Austin, 2000; Brinkerhoff, 2002; Bryson, Crosby & Stone, 2006; Kamensky, Burlin & Abramson, 2004, p. 10; Perkin & Court, 2005, p. 11). Agranoff and McGuire (1999) have argued stakeholders' ability to work together is "less dependent upon a shared belief system, ideology, and common world view than it is on a shared rationale for organizing embodied in the project or program itself" (p. 29). Members should agree on the methods and means perceived necessary to accomplish their shared aims.

Once stakeholders determine a general course and intentions, they must negotiate agreements regarding each partner's responsibilities (Brinkerhoff, 2002; Bryson, Crosby & Stone, 2006; Creech & Willard, 2001). Clear expectations are essential for organizational direction and building strong relationships (Vernis *et al.*, 2006, p. 44). In many cases, these agreements are informal and stakeholders rely on other members' commitment to their common purpose to ensure understandings are fulfilled. Whether informal or formal, these agreements help to form positive working relationships among network members. During this phase of a collaborative's development, stakeholders typically assess the strengths and weaknesses of their potential network partners and form professional and personal judgments concerning each. The first few meetings of such groups, therefore, should provide time and opportunity for participants to discover commonalities and differences.

In the second stage—the formation stage—although informality regarding procedures may assist in creating a more comfortable atmosphere, Ehin (2004) has argued some formalization is necessary "to not only help people stay on track but also to be a viable aid for decision-making" (p. 128). Formal rules and procedures are intended to promote inclusivity, consensus, and accountability. However, Thompson (2003) has cautioned "institutionalized patterns of behavior organized around codes, routines, norms, habits, rules and custom create severe problems of adaptation to changing circumstances" (p. 128).



Compromises may be needed regarding how much formality must be adopted or pursued among collaborators (Brinkerhoff, 2002, p. 81). Too much decorous stiffness among participants may stifle not only the flexibility of the structure, but also the potential creativity its membership represents.

To encourage the likelihood that formal and informal rules and procedures, including communications strategies, will succeed, Goldsmith and Eggers (2004) have recommended network actors explore and agree to explicit dispute resolution methods, exit options for members, and mechanisms by which to transfer skills and knowledge (p. 142). Procedures for settling disagreements and exiting the group permit members to maintain cordial, open working conditions. Networks can utilize technology to encourage adoption of effective communication and procedures. According to Dewett and Jones (2001), “The use of common IT defines a clear means of ongoing communication; an agreed upon standard for storing and accessing alliance related work; and it creates a repository of all guiding goals, rules, and procedures which participants can reference” (p. 334). Technology also can assist with transferring knowledge among members. IT gives networks permanent memory, allowing for institutionalized learning by furnishing participants with “the ability to capture and integrate explicit knowledge by making it easy to codify, communicate, assimilate, store, and retrieve” (Dewett & Jones, 2001, p. 322). It is unclear whether IT can effectively convert tacit knowledge into explicit knowledge, or soft information into usable information. However, Dewett and Jones (2001) have argued the following:

due to advances in technology the use of IT no longer precludes the capture of soft or tacit knowledge as several authors have warned. For example, IT applications allowing for the simultaneous use of audio and video media in group settings to convey messages is becoming widespread, overcoming earlier concerns that were based on single-media IT applications (e.g., electronic mail) (p. 322).

To the extent feasible, research suggests collaborations should be established as safe spaces for negotiation and idea exchange (Powell, 1990, p. 300). Several scholars have claimed open and secure spaces allow members to negotiate and exchange ideas about any rules, procedures, and values they may deem necessary for their networks to function effectively (Agranoff, 2006; Agranoff & McGuire, 2003; Creech & Willard, 2001; Ehin, 2004; Goldsmith & Eggers, 2004; Linden, 2002; Milward & Provan, 2006; Thompson, 2003). Agranoff (2006) has suggested that agreed-upon rules and procedures for decision-making increase learning opportunities (p. 60). During such sharing, it is critical that stakeholders present information that is accurate, legitimate, and comprehensible (Agranoff & McGuire,



2003, p. 180). These efforts help to create a suitable structure and “working” culture of shared norms in order to achieve common goals.

Additionally, in this phase, stakeholders, and in particular the network’s designated manager, should ensure the network’s structure is as flexibility as possible (Agranoff, 2007; Beyerlein *et al.*, 2003, p. 34; Creech & Willard, 2001) so as to permit network membership to expand and contract as necessary. The dynamic nature of the complex issues typically addressed by network organizations subjects them “to rapid change with emergent challenges” (Agranoff, 2007, p. 119). Participants, as a result, should accept and anticipate continual adjustments to their operating processes as conditions warrant.

Network structure plays a significant role in shaping how member organizations interact (Agranoff & McGuire, 1999). Network arrangements include matrix structures and chain configurations (Kamensky, Burlin & Abramson, 2004). But, according to Provan, Fish, and Sydow (2007), three governance structures appear most suitable for collaborative efforts: shared, lead organization, and network-administrative organization. Shared governance relies on an informal arrangement and cooperation among stakeholders regarding “strategic and operational decisions” (Provan, Fish & Sydow, 2007, p. 504). In this form, participant relationships should not only be based on the confidence of others, but also on trust. Lead organization (or hub-spoke) structures, on the other hand, designate one organization to coordinate activities (Provan, Fish & Sydow, 2007, p. 504). Participants must be willing to assist the lead organization with coordination and decision-making in order to make progress. Network-administrative organizations (NAOs) resemble lead organization structures except for two main differences. First, in NAOs, an organization or manager is specifically designated to manage the collaboration. Second, the coordinating organization or manager does not participate in activities, but instead guides and supports participants as they undertake shared efforts (Provan, Fish & Sydow, 2007, p. 504). Regardless of form, structure will affect a collaborative’s effectiveness. Provan and Milward (1995) have argued networks are most successful when “integration is centralized, external control is direct and nonfragmented, the system is stable, and resources are adequate” (p. 30).

Network structures tend to be porous. Some scholars have argued network arrangements are designed to be open systems (Agranoff, 2007; Castells, 2000; Chisholm, 1989) that anticipate and accept shifting boundaries. Open systems encourage members to bring fresh ideas to the table—whether those notions have emerged from within the group or from the outside. Collaboratives allow for rapid information exchange, distributed decision making and creative solutions. Open systems support appropriate coordination and communication mechanisms because they help to ensure the continuity and

resilience of the group and its intentions. As open systems, network members rely on each other as well as on external ties. The dynamics of member relationships as well as their associations beyond the network change these boundaries over time, thereby modifying the collaborative structure.

Another key design issue is whether networks should be planned as centralized or decentralized entities. Centralization allows for command and control, reducing uncertainty by providing tighter coordination and concentrating decision-making within the network. Decentralization, on the other hand, offers flexibility and provides members with the necessary expertise to make decisions on behalf of the group more quickly. IT may facilitate either centralized or decentralized network arrangements. According to Dewett and Jones (2001), management information systems permit managers “to obtain more information, more quickly and accurately... [pushing them] to make decisions that they otherwise may not have made” (p. 329). On the other hand, chat rooms and discussion groups may encourage decentralization, allowing managers and other network members to remain current on the issue at hand and “to be more globally optimized in their work” (Dewett & Jones, 2001, p. 330). Regardless, information sharing is vital to group success.

Ehin (2004) has suggested that “information is the lifeblood of a self-organizing system” because the coordination and communication requirements of networks are high (p. 125). They not only keep information flowing and pave the way for progress, but also may help to solidify participants’ bonds. Information systems assist in keeping stakeholders aware of timelines and deliverables, thereby keeping all involved apprised of the group’s purposes and progress toward attaining them. Thus, it is imperative managers and other stakeholders take the time to devise appropriate communication and coordination mechanisms that facilitate relationships among participants. Agranoff (2007) has claimed the communication channels of network configurations “substitute for the hierarchical structure” (p. 101).

One important communication and coordination mechanism is face-to-face meetings. Meetings serve as “social platforms” (Agranoff, 2007, p. 122). How often a group meets influences how close-knit its participants may become. Multiple interactions of varying types provide opportunities for individuals to share explicit as well as tacit knowledge, while developing group norms of acceptable behavior. Even though intranets and electronic bulletin boards allow for constant communication, they are no substitute for physical presence. Social mechanisms actually replace rules and bureaucratic authority as the group creates its own internal processes. As connections among stakeholders become tighter, enhanced trust results. Agranoff (2007) has argued network organizations should have standing committees or working groups to push the work forward (p. 118). Smaller teams may help bring participants closer on a

professional and even personal level. Team-building efforts generally improve interpersonal communication (Agranoff & McGuire, 2003; Goldsmith & Eggers, 2004; Ehin, 2004; Linden, 2002). They allow the group to “create higher standards for discussions, dialogue, and information sharing” (Beyerlein *et al.*, 2003, p. 34).

Establishing coordination and communication tools takes time. This includes time to adjust to and learn about new technology. Network stakeholders should anticipate missteps as they adjust to one another’s working preferences. Network managers should ensure steps are taken to create some sense of stability in an ever-changing organizational environment. Technologies can assist as they can serve as stabilizing mechanisms, instruments of organizational memory, influencers of cultural norms and behaviors, and conduits for strengthening member bonds. When members rely on communication links, such as intranet access, they not only gain access to numerous information sources, but also have been shown to increase their involvement and communication in the relevant network (Dewett & Jones, 2001, p. 324; Huber, 1990, p. 53). Greater individual participation generally leads to increased trust among members and creativity within groups. According to Agranoff and McGuire (2003), “choices that managers make in any context define whether the organization will adapt to its environment, influence the environment, or attempt to buffer itself from the effects of the environment” (p. 29). These choices will also affect likely the relative strength of the collaboration.

Accountability mechanisms may be utilized to strengthen collaborative efforts. Accountability measures are critical to maintaining trust once such bonds are established among network participants. As members demonstrate commitment to and completion of their tasks, other participants are more likely to perceive them as trustworthy concerning their shared aspirations. Thus, communication and coordination channels should be designed and implemented early in network formation. Linden (2002) has suggested the more open that communication process is, the more likely it will be successful (p. 60). By understanding individual inclinations and overall group dynamics, managers and other participants are better able to design and employ effective decision-making processes and tools. Agranoff and McGuire (2003) have claimed, “empowerment is based on information rather than authority” and that information will not only enhance the possibility of consensus, but also overall group development (p. 179). Additionally, managers should understand the specific incentives necessary to motivate stakeholders to nurture and sustain trust while remaining engaged in collaborative efforts (Agranoff & McGuire, 2003, p. 177; Goldsmith & Eggers, 2004, p. 142).

Trust can be generated through accountability, transparency and sharing of reliable information (Agranoff & McGuire, 2003; Brinkerhoff, 2002; Linden, 2002; Milward & Provan, 2006). According to Brinkerhoff (2002),

Information sharing is the foundation for mutual understanding and trust and confidence building. To determine accountability and transparency mechanisms, actors must identify the need for exceptions to existing partner organization requirements and develop new partnership-specific procedures based on an appreciable understanding of each partner's constraints, including limited resources (p. 90).

Technology can help to ensure both the transparency and reliability of information, resulting in improved accountability for its contents. The importance of trust is based on the potential use of the technology to increase information sharing (Hart & Saunders, 1997, p. 30). Internally, this can lead to tighter bonds among members and improved coordination. Placing program information online for members, and even the public, to review, also makes corruption more difficult (Starling, 2010, p. 558). For instance, more and more public agency collaboratives have their own websites, chat rooms, and Twitter accounts. Such accessibility and transparency should lead, over time, to increased levels of trust in society of the public sector.

As trust is a key element of network success, managers must concentrate on developing and maintaining trusting relationships within network organizations. Child and Faulkner (1998) have argued trust may take three forms: calculation, understanding, and bonding. To a considerable degree each form builds on the existence of its predecessor and cannot exist without it. Trust based on calculation involves self-interest. This form of trust suggests individuals (or organizations) join collaborative efforts because they believe it will advance their personal interests to do so. They participate because group members possess resources that they do not. However, some level of trust—or confidence—is needed so that members will share their own resources fully with others in their group and will apportion information honestly and openly. Trust based on understanding, therefore, “develops as the partners discover by working together that each is as good as his word, and one partner's actions may therefore be accurately predicted to be as it commits them to be” (Child & Faulkner, 1998, p. 116). During this stage, stakeholders recognize better members' capabilities and how they influence the entire group and its processes. Finally, trust based on bonding occurs when stakeholders trust other members professionally and personally. Such bonding takes time, but progress can be advanced when participants display genuine

respect for others. Child and Faulkner (1998) have contended that if this type of bonding occurs, “it is the best guarantor of a successful relationship” (p. 116).

Agranoff and McGuire (2003) have suggested managers’ tasks focused on collaborative relationships may be usefully divided into two categories: actions intended to change members’ perceptions and efforts aimed at altering members’ interactions. Managers who need to change existing perspectives may introduce or prohibit new ideas, engage in bargaining or encourage members to reflect on their actions and viewpoints, whereas managers who seek only to influence relationships may re-structure collaborative opportunities to encourage them by altering members’ positions and mediating among participants’ views (Agranoff & McGuire, 2003, p. 36). In each case, although to varying degrees, managers are responsible for framing or re-framing issues for the group. Managers seeking social change may need to press for modifications in the rules and norms that underpin participants’ understanding of their relationships. Such rules may actually place restraints on actors’ behaviors. Once perceptions shift, managers may then create opportunities to redirect the network’s direction.

Once a network’s structure has been adopted and its major decision and accountability processes created, managers should begin concentrating on transitioning to the third or execution stage. Creech and Willard (2001) have claimed that network members institutionalize their relationships during this phase of a collaborative’s development. This stage also finds a network beginning to implement actions aimed at attaining its members’ shared goals.

Generally, managers should concentrate on affirming value to stakeholders, managing relationships, enhancing accountability, and developing a learning system during this third stage. Network managers must demonstrate that the benefits of collaboration outweigh its costs to members. Execution also finds managers seeking to connect their network’s work clearly to its surrounding environment. In so doing, leaders need to remain alert to any changes in external factors affecting the group. Ehin (2004) has emphasized the importance to network managers of “scanning the terrain” and “tracking the present” to anticipate potential challenges and to design adjustments to address them (p. 129).

Power issues may become more evident during this third stage. Power implies influence and, in management, it often concerns the capacity to convince others to change their opinion, decision or behavior(s). Power can be intimidating and dividing and it is unlikely to be evenly apportioned within networks. As Child and Faulkner (1998) have observed, “All network members, although formally regarded as equals by virtue of membership, will not have the same degree of power, and it is the linkages

between the members and their respective power over each other in causing outcomes that determine the culture” of networks (p. 116). To keep specific members from becoming too powerful, managers may have to alter the distribution of shared resources. While often difficult to attain, such actions do frequently reduce uncertainty about inequality among participants and, therefore, increase cooperation.

### *Maintaining Network Structures*

Several challenges now confront network organizations. Some scholars (Babiak & Thibault, 2009; Child & Faulkner, 1998; Linden, 2002; Vernis *et al.*, 2006) have suggested networks often lack sufficient human and financial resources to secure their aims. In addition, differences in personal, institutional and cultural values and difficulties with coordination efforts often mar efforts to secure truly effective networks. These challenges frequently result in fierce competition for resources among supposedly partnering organizations as well as widespread and common communication problems. These and related challenges may be grouped into three principal categories: those related to structure, those linked to member relations, and those concerned with network management.

When creating network structures, it is important that they be established as open systems since their capacity to react to the claims of external stakeholders over time is likely to condition their relative success. Despite what might be labeled an imperative of relative openness, Thompson (2003) has suggested, “Networks by their very nature are exclusive communities—you are either in them or outside of them” (p. 123). While such exclusivity increases interdependence among members, it can limit a network’s openness to outside influence and thereby narrow its expertise and strategic awareness (Miles & Snow, 1992, p. 57) since participants may limit or stop reaching out to others beyond their group for new ideas and knowledge (Walker, 1997, p. 81). Such limitations may lead to organizational dysfunction or atrophy. Network managers must work actively to manage the difficulty of ensuring that their organizations maintain sufficient coherence so as to generate benefits and the loyalty of their members without so closing themselves off as to risk dysfunction or the decline of supporting relationships with key actors in their strategic environments.

Huxham and Vangen (2000) have argued that structure itself plays a significant leadership role; it can control which members have power to act, have resources to tap, and even have influence over the network agenda. In this view, structure is seen as providing contextual leadership (Huxham & Vangen, 2000). Position in a network’s configuration may shape members’ relative power to act and to shape outcomes. Structure, as a result, may affect the way participants behave. According to Castells (2000),

relations based on power actually determine structure: “the network morphology is also a source of dramatic reorganization of power relationships” (p. 502). In other words, the core of network structures lies with member relations, the second challenge to be discussed.

Positive relationships are key to the effective functioning of networks, but achieving these can be a Sisyphean task for the managers involved. This is so for several reasons. First, human dynamics in general present numerous challenges. Several researchers have suggested factors that hamper the formation and maintenance of strong network relationships: lack of time, turnover among staff and volunteers, geographic distances, funding cutbacks, a prevailing view that existing relationships are sufficient, struggles for power, and lack of trust (Agranoff, 2006; Agranoff & McGuire, 1999; Creech & Willard, 2001; Ehin, 2004; Kilduff & Tsai, 2003; Landau, 1991; Miles & Snow, 1992; O’Toole, 1995; Thompson, 2003).

All entities deal with inequalities and struggles for and against power. Brinkerhoff (2002) has argued “Power is an unavoidable dimension in any relationship, whether between individuals or among organizations” (p. 177). Several scholars (Agranoff, 2007; Agranoff & McGuire, 2003; Babiak & Thibault, 2009; Bryson, Crosby & Stone, 2006; Castells, 2000; Child & Faulkner, 1998; Chisholm, 1989; Kenis & Provan, 2006; Kilduff & Tsai, 2003; Landau, 1991; Linden, 2002; Milward & Provan, 2006; Podolny & Page, 1998; Thorelli, 1986; Vernis *et al.*, 2006) have also broached the concept of power. Within network arrangements, members share an incentive to pursue common goals. Some participants, however, may try to shape and use networks and their resources for self-interested or individual organization purposes. They enter into collaborations with their own loyalties and may want to gain or exercise power to ensure they benefit from their involvement. They, therefore, pressure others to meet their own ends. Linden (2002) and Thompson (2003), respectively, have warned stronger and/or more resourceful partners in networks do often take advantage of those who appear weaker or less resourced (p. 100, p. 235).

These struggles for advantage or control, however, act to make networks more vibrant. As noted above, participants attempt to gain such control for fear of losing their autonomy, and even identity (Babiak & Thibault, 2009, p. 120; Child & Faulkner, 1998, p. 126; Linden, 2002). Several researchers have discussed ways in which power can be acquired, such as:



- Economic, technological, political, and/or intellectual resources that other network members cannot replicate (Agranoff, 2006, p. 61; Dewett & Jones, 2001; Milward & Provan, 2006, p. 10; Thorelli, 1986, p. 40);
- Control of information (Agranoff & McGuire, 2003, p. 186); and
- Connections inside the network structure and outside of it to experts and champions (Agranoff, 2007, p. 100; Child & Faulkner, 1998, p. 116).

Nevertheless, all members automatically have power as they may opt to disagree with decisions or decline to participate in network activities. Dissenters may delay or eliminate an activity or strategy as well as invoke their veto power. Such capacity to choose allows them “to exclude certain actors, to ban certain points of view, or to put potential actors outside of the network” (Agranoff & McGuire, 2003, p. 185).

Another reason why achieving enduring positive relationships in a network can be difficult arises from the fact that when members seek to exercise power, for whatever array of reasons, conflict or tension is generally the outcome. Agranoff and McGuire (2003) have cautioned that more research is needed to understand “whether power moves hinder the kind of synergistic creativity that reciprocal relationships are purported to produce” (p. 185). If members devise clear rules, appropriate communication channels and accountability mechanisms in the early stages of network development, unnecessary conflict should be reduced (Agranoff & McGuire, 2003, p. 134; Chisholm, 1989, p. 86; Kenis & Provan, 2006, p. 229; Linden, 2002, p. 82).

Yet, conflict may be needed at times to keep network organizations innovative; “challenges and disagreements are central to the functioning of a shared-access system” (Ehin, 2004, p. 74). Tensions serve to keep members engaged and push them to reconsider their views. Also, power can be harnessed to improve network performance. If participants learn to share power, or agree that it should be distributed—at times unevenly—among themselves, participant expectations about roles and tasks may become clearer, leading to increased network effectiveness. Shared power can create tensions, but, it can also lead to improved network cohesiveness: “A network is, in a sense, something that holds a tension within its own form—a grouping of differences that is unified” (Galloway & Thacker, 2007, p. 61).

These tensions must be balanced in networks so they do not lead to undue conflict. This is achieved in considerable measure through trust. As argued above, trust reduces member resistance. Members may cooperate with others whom they trust when those individuals are the ones who create the conflict in



order to change organizational direction. In their study of an inter-organizational network structure, Babiak and Thibault (2009) found “power and trust played a role in both introducing and overcoming some of the competitive–collaborative efforts faced by partners” (p. 139).

Once trust is established, it is this “baseline” that members hold in account to use in the future. They assume if they do something for one or more members, those members will respond in kind at a later time. Such norms of reciprocity become part of the collaborative culture, leading some members to feel a sense of obligation to others. According to Hart and Saunders (1997),

To the extent that one partner conforms to the expectations, the other partner will be encouraged to continue the association. Thus, there is a reciprocal relationship between continuity and trust: as trust reinforces the prospect of continuity in a relationship, a commitment to extend an interorganizational relationship into the future encourages trust (p. 30).

Yet, as noted above, these same norms may create problems if they result in behaviors that hinder flexibility and necessary network adjustments.

Even so, trust is the foundation of network relations and management (Agranoff, 2007; Agranoff & McGuire, 1999; Agranoff & McGuire, 2003; Beeby & Booth, 2000; Child & Faulkner, 1998; Goldsmith & Eggers, 2004; Linden, 2002; Milward & Provan, 2006; O’Toole, 1995; Thompson, 2003; Walker, 1997). Members must trust each other to share relevant information to achieve agreed-upon goals and address specific problems. They must trust that members are competent and committed. The development of such relationships does not happen instantly or automatically. As Huxham and Vangen (2005) have observed, “Workable relationships take time—often around two years—to establish and the world does not stand still for long enough for embedding to take place” (p. 152). Meanwhile, Walker (1997) has questioned whether trust is sustainable in these relationships:

Is it reasonable to suppose that all members of a network can develop and maintain sufficient levels of multilateral trust, commitment, and shared relational norms to avoid the kinds of information silos; conflicts over divisions of domain, resources, or rewards; and bureaucratic inertia that plague hierarchical organizations in turbulent environments? (p. 77).

To maintain trust and cohesion among members, Agranoff (2007) has suggested mutual exploration, demonstration of competencies, nonencroachment on other members' field of expertise, display of respect for other members, and progressive results (pp. 121-122).

Trust, interdependence and unity of aspirations “may be analogous to the cohesive force of legal-rational authority in bureaucracies” (Agranoff & McGuire, 2003, p. 182). Yet, the network literature seldom addresses who is responsible for ensuring unity in network organizations or how designated managers or other participants function within them (Agranoff, 2007, p. 26; Provan, Fish & Sydow, 2007, p. 503). Managers are expected to coordinate and assist members, but they rarely have any “real authority” over those individuals or their organizations. Network actors are beholden to their own goals, have their own authority measures, and are usually voluntarily involved.

A third primary challenge for networks involves their effective management. One difficulty is developing efficient decision-making processes. With networks now utilizing communication technologies, it is essential that managers understand how these technologies affect network governance. Starling (2010) has discussed four types of IT for managers to consider regarding the sharing of information: executive information systems, decision support systems, expert systems, and groupware (pp. 547-548). Expert systems are computer systems designed with sets of rules to interpret data and draw conclusions to address issues (Dewett & Jones, 2001, p. 323; Starling, 2010, p. 547). Huber (1990) has suggested that decision support systems can even be used during meetings “to conduct analyses that provide new information with which to resolve disagreements about the significance of effects of different assumptions” among members (p. 55). All four systems facilitate access to information and help managers with analyzing and solving problems. According to Dewett and Jones (2001), these information systems offer the following:

decision-making efficiencies including the ability to store and retrieve large amounts of information more quickly and inexpensively; the ability to more rapidly and selectively access information created outside the organization, the ability to more rapidly and accurately combine and reconfigure information; the ability to more concisely store and quickly use experts' judgments and decision models; and the ability to more reliably and inexpensively record and retrieve information about the context and nature of organizational transactions (p. 325).

Network members, therefore, should find appropriate use of IT helpful in enhancing their effectiveness.

That effectiveness, it turns out, also rests on the maintenance of relationships among the network's principals. Network management generally involves numerous stakeholders with diverse backgrounds who come together to engage in joint activities and strategies for shared purposes. To have any chance of motivating the direction and choices of these otherwise autonomous members, network managers need to understand members' viewpoints in order to recognize when to intervene to find consensus or to avoid conflict. Both structural and relational management require facilitation and communication skills (Agranoff & McGuire, 2003, p. 178; Goldsmith & Eggers, 2004, p. 158). Facilitation skills assist managers in negotiation, problem solving, team building, and strategic planning. Through effective communication skills, managers may reframe issues and introduce new ideas. In essence, network managers spend a great deal of time on trust and cooperation issues.

Building a trusting environment among diverse stakeholders is a dynamic and difficult endeavor (Babiak & Thibault, 2009, p. 117; Linden, 2002). Researchers have suggested managers should focus on sustaining commitment to network aims (Ehin, 2004; Linden, 2002; Milward & Provan, 2006), while minimizing conflict (Goldsmith & Eggers, 2004; Kilduff & Tsai, 2003; Milward & Provan, 2006; Thompson, 2003) among participants to secure trusting bonds within the group. Managers demonstrating dedication to the network are more likely to persuade other members to participate. Member involvement leads to participant buy in, resulting in stronger commitment to network goals and possibly to other members.

Network managers must also be alert to causes of collaborative failure and cooperation breakdown. "Instead of managing for success, Landau asserts that we are better off managing to protect against failure" (Chisholm, 1989, p. 183). Several factors may lead to the failure of network organizations:

- Turf protection may cause members to become too competitive (Beeby & Booth, 2000; Linden, 2002);
- Immediate costs of participation in the network are too high to justify the long-term benefits for one or more members (Chisholm, 1989; Linden, 2002);
- Networks may become vehicles for authorities to avoid "difficult or costly responsibilities" (O'Toole & Meier, 2004, pp. 681-683); and
- Technologies are incorrectly selected and employed (Castells, 2000; Dewett & Jones, 2001; Goldsmith & Eggers, 2004; Starling, 2010).

Indeed, networks may fail because ineffective technology causes “communications meltdown” and results in “data deficits and capacity shortages” (Goldsmith & Eggers, 2004). This often occurs because networks do not update or modify their technologies; the time and cost to implement new technology and train individuals on its effective use can be high (Dewett & Jones, 2001, pp. 315, 338). According to Starling (2010), public sector failures with technology are mainly due to “overly aggressive or unrealistic cost-reduction goals; the nature of bureaucracy—it has few direct rivals; and poor project management” (p. 560). Even with appropriate technology systems to collect and store network information, pitfalls exist in interpreting material. Starling (2010) has warned, for instance, that “people believe the more accurate the information is the more informative it is, which is not necessarily true... [and] people are influenced by how information looks” (pp. 543/544).

Since all but one of these factors is within the purview of managers, it is useful to recall that managers may themselves cause the collapse of network collaborations. They may inaccurately design the structure for maximum efficacy (Miles & Snow, 1992, p. 53). They may spend too much time on internal activities rather than discerning the potential impacts of external forces. Miles and Snow (1992) found managers “tend to wait until environmental demands accumulate to crisis proportions before attempting a response” and even when they anticipate environmental implications, managers “frequently make patchwork alterations to the existing organization ...without considering the ultimate systemic impact” (p. 70). Managers also may “respond to the stronger and more politically powerful elements of the surroundings, thus magnifying the tendency toward inequality” (O’Toole & Meier, 2004, p. 681). Such behavior may create rivalries among members or discourage participation if they feel their involvement is being discounted. Managers seem to have some power to direct and influence the overall direction of network dynamics when they are dedicated to shared processes and goals. In other words, leadership quality and commitment appear to be significant factors in avoiding network failure.

Network organizations generally require collaborative leadership. Joint responsibility promotes information exchange, leading to increased transparency. Collaborative leaders rely less on positional power to encourage goal alignment and achievement among members. These leaders instead rely more on respect and trust. As Agranoff and McGuire (2003) have contended, collaborative leadership is about “roles in a system of strategic interactions” (p. 183). Managers, as a result, must demonstrate “to participants that their involvement has meaning and direction” (Agranoff, 2007, p. 111). Collaborative leaders act to hold networks together by developing and maintaining the trusting relationships across the

structure necessary to sustain it. According to Linden (2002), “This is the way you need to work when you want to provide leadership and have no formal authority over your peers” (p. 60).

### *Sustaining Network Structures as Learning Organizations*

Network configurations appear to be here to stay. For future success, it is important for those shepherding these entities to create mechanisms to allow them to learn and adapt to their changing contexts, to demonstrate success and to change their structures and decision processes when necessary. Leaders must act also to ensure network accountability despite the organizational complexity of such structures.

From their inception, networks should be designed to act as learning organizations to the extent feasible (Agranoff, 2006; Agranoff, 2007; Agranoff & McGuire, 2003; Austin, 2000; Beeby & Booth, 2000; Brinkerhoff, 2002; Creech & Willard, 2001; Linden, 2002; Podolny & Page, 1998). Open systems promote sharing of information and knowledge. Learning occurs through common exploration and stakeholder engagement (Agranoff, 2007; Linden, 2002) as well as through network members’ continuous prudential reflection on their actions (Creech & Willard, 2001; Linden, 2002). All of these both result from and contribute to trusting relationships.

Networks too constitute distributed environments. That is, they are organizational structures in which it is impossible for any single actor to exercise even limited control (image “steering”) without the consent of those engaged and in which various participants play alternate roles of their own devising, while also sharing in a mutually defined and managed enterprise. In such an environment, managers must encourage opportunities for sustained interaction, at the same time trusting that participating organizations will choose on the basis of their own capacities to act, when necessary, in ways that will conduce to the needs of the collectivity. As highlighted repeatedly above, distributed environments require trust and demand that participants devise shared mechanisms of meaning and modes of operating that finally result in broadly communicated lessons and learning.

Argyris and Schon (1996) have argued that learning is not a single-faceted process but a dual one characterized by both *single-loop* and *double-loop learning*. Single-loop learning is “concerned primarily with effectiveness: how best to achieve existing goals and objectives, keeping organizational performance within the range specified by existing values and norms” (p. 22). Double-loop learning, meanwhile, consists of “inquiry through which organizational values and norms themselves are modified” (Argyris &

Schon, 1996, p. 22). For his part, Senge (1990) has dubbed these two modes adaptive and generative learning. Network managers need to ensure that their efforts encourage the necessary ties and relationships that may result fairly routinely in generative learning. Information management systems and technologies can assist in efforts to secure that result by ensuring frequent, open, and transparent communication of critical knowledge as it pertains to the shared aspirations of network members. Information management technologies may also encourage such sharing in strategically relevant ways so as to result in new forms and forums for participant interactions. These imply the development of new shared claims, as circumstance and implementation efforts unfold. Information technology may help to aggregate the data and cumulative experience necessary to allow network members to align around new claims despite their independent wherewithal to make choices concerning acceptance of such advances in understanding and the new paths they represent. Such technologies may also help managers and individual network participants alike to ensure that members receive sufficient knowledge and develop ties requisite to allow each to maintain relative operating autonomy while simultaneously participating together in common program efforts. Paradoxically, maintaining that situation successfully allows for the essential conditions necessary for the potential development of common action.

According to Austin (2000), networks must define and create shared benefits as well as renew and develop shared values as changing situations indicate. Managers may need to work periodically with participants to reframe those beliefs in order to move the network to a new self-understanding suited to changed circumstances. By definition, this scenario, repeated frequently for networks, demands collective learning in an otherwise distributed environment. In this way, managers may need to move to new collective understandings to continue to address their members' common goals. Austin (2000) has suggested, "Every relationship involves an exchange of value among the participants. The magnitude, form, source, and distribution of that value is at the heart of relational dynamics" (p. 87). This statement underscores the continuing need for member learning, resulting in network-level knowledge acquisition to manage changing environmental conditions. Network capacity to address this imperative depends in part on the forms of information sharing available and how those are altered in due course in response to emerging imperatives.

Network management implies shared leadership among the principals, even when a "lead" entity is designated, and it therefore demands a commitment to and learning from all participants. Recognition of that responsibility may provide an incentive among network actors to work mutually to re-establish the professional and personal trust necessary to securing and maintaining the effectiveness of their network in the face of varying environmental circumstances. That imperative implies a robust capacity to change

forms and forums of information rapidly as networks' needs dictate. These serve as an essential lubricant not only for inter-personal trust, but also for generational network learning over time

## Conclusion

Scholars in various disciplines have consistently researched concepts pertaining to network organizations and their management during the last half century: reasons for their formation, their benefits, the forms of intra- and inter-organizational relationships they evidence, the managerial skills necessary to operate them, how trust (or its dearth) affects them, how cooperation is achieved within them, and how they might be appropriately classified. Analyzing these issues is critical to understanding how such configurations function. Yet, more research is needed concerning network leadership, power, and conflict. Does appointed or natural leadership serve networks' distributed dynamics more effectively? Are both needed, and if so, why? How does participants' and managers' power explicitly affect group structure and relationships? How can conflicts among network principals be managed effectively to build consensus among varied stakeholders? What forms of mediated information systems promote trust within networks and how and why? All of these questions relate to member relations.

Nonetheless, purposefully formed network organizations appear better able to produce novel strategies to address complicated problems. Although they face some typical challenges of other organizational forms, such as incomplete information or communication problems, Agranoff and McGuire (1999) have contended, "multiorganizational networks do offer the most *potential* for flexibility and adaptation of any social form" (p. 25). Network arrangements—open horizontal systems—provide mutual benefits and shared aspirations of stakeholders. They encourage interdependence and consensus on decisions. They offer space where expertise and capabilities converge to produce innovative means to address complex social issues. Thus, networks may be the most appropriate forms to anticipate continued increasing economic, political, and social interconnections on a global scale.

Effective networks are based on trust-filled connections among individual and the organizations of which they are a part. Yet, they are neither of these alone, but something more: a common penumbra of aspiration and knowledge that is learned and shared and incorporated into changing the ways participants operate in their organizational roles. To the extent analysts speak of network learning or dynamics, they are referring to just such processes and phenomena. Members remain distributed and continue to possess independent wherewithal to take such steps as appear appropriate in their organizational contexts. Network actors identify their need for specific links to achieve shared purpose and these must establish



processes by which those understandings may change collectively as exogenous conditions may require. While network participants understand their interdependency, each member brings information and resources to their common enterprise that other members do not possess. They recognize that joint efforts are more likely to generate innovative solutions and original approaches to address their mutual challenges that any actor could generate alone. The nature and strength of internal relationships determine how groups are structured and operate, and these attributes are mediated over time in part by the nature of the information and meanings routinely available to members. In this sense, management information technologies and systems represent an essential component of interpersonal, inter-organizational, and network scale generative learning and change.

All of this said, decision-makers should use caution when establishing networks. Whatever their popular salience, networks constitute an exceptionally complex form of governance that demands sophisticated management, appropriate resources and thoughtful and patient political support if they are to realize their potential advantages. None of these is easy to secure and all demand that the broader public understand the strengths and weaknesses that attend this organizational form. Adequate and appropriate information systems alone will surely not ensure these conditions and, absent these prerequisites, it seems clear that networks are as likely to fail as any other form of governance. There is no substitute for ongoing and informed public support and appropriate resources, of all sorts.

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