

**Answering the Big Questions, Asking the Bigger Questions:
Expanding the Public Network Management Empirical Research Agenda**

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Introduction

The multitude of recent empirical research on public management networks seems to raise as many new questions as it does answer current ones. In spite of the recent wave of research, what we don't know about networks continues to outpace what we do know. For example, just as the field develops thorough descriptions of network structures, a concern has emerged for how they change. Just as scholars begin to provide a look inside the "black box" of networks, issues of network process grow more complex. Just as networks appear to be emerging everywhere in the public and non-profit sectors, there is lingering evidence that bureaucratic management remains most important. We know that some networks are "better" than others, but are still learning why; that too much process can stultify collaborative operations, but are still learning how; and that networks work in some situations and not in others, but are still learning when. In short, the big questions of public network management research are giving way to even bigger questions.

We use the term "network" to refer to a structure involving multiple nodes—agencies and organizations—with multiple linkages. A public management network includes agencies involved in a public policy making and/or administrative structure through which public goods and services may be planned, designed, produced, and delivered (and any or all of the activities). Such network structures can be formal or informal, and they are typically intersectoral, intergovernmental, and based functionally in a specific policy or policy area. That is, officials from government organizations and agencies at federal, state, and local levels operate in structures of exchange and production with representatives from profit making and not for profit

organizations (McGuire 2003).

We examine six basic questions of public network management, offer preliminary answers to some of these, and raise a series of subquestions that we argue can and should be addressed with empirical research. First, we discuss the issue of governance structures of networks and the changes that sometimes occur in those structures. How do networks structures form and evolve? Second, we address the issues regarding the way that networks “learn” through knowledge management. How is knowledge used, shared, and managed? Third, we explore what happens when networks “hit a wall.” What are some barriers encountered by networks and how do they overcome them? Fourth, we consider the performance of networks. How can networks be evaluated for their effectiveness? Fifth, we raise an often discussed but seldom deeply explored issue of the relationship between networks and the state. What is the role of the network within the context of government and governance? Sixth, we pursue questions regarding how to study networks. Is there a “best” method for empirically researching networks? We ask these six “bigger” questions with the intent of stimulating subsequent research and to encourage further developing the field’s understanding of the “how, why, and when” of public management networks.

What are the origins of specific network structures? Why and how are governing choices made? And why are network structures and processes often transformed over time?

Research on network structures rarely recognizes the formation, evolution, and, sometimes, death of a network. It has become accepted that the prevalence of a networked public management is associated with the pace and quality of social change (Agranoff and

McGuire 2001), the transformation of societies from labor oriented to knowledge oriented (Agranoff 2007), the increasing presence of “wicked” problems (O’Toole 1997), and a change in government roles from direct provision to steering, partnering, and contracting (Kooiman 2003). There is also a strong base of knowledge regarding the general antecedents to networks, which include environmental factors such as resource scarcity (Levine and White 1961) and dependence (Gray and Wood 1991; Koppenjan and Klijn 2004; Pfeffer and Salancik 1978), interdependence among organizations in a particular sector or organizational domain (Scott and Meyer 1991), sector failure (Bryson et al. 2006), and in order to decrease transaction costs (Williamson 1975), among others.

In addition to the environmental and societal antecedents to network scope and incidence, do the origins of networks mirror the birth of bureaus (Downs 1967)? Networks can be created by a charismatic leader or leaders and a group of organizational representatives linked together by their devotion to a cause set forth by the leader. Similarly, what Downs called “entrepreneurship” could be a driving force to establish a network, whereby organizational representatives provide enough support to propose a non-governmental, non-market structure. Although networks may not always emerge as a result of “advocates or zealots” as suggested in Downs’ analysis of the origins of bureaucratic organizations, certainly a champion or political backer is often needed to provide the impetus toward creating and even sustaining a network.

Alternatively, like some government agencies or non-profit organizations, a network is often created out of nothing by one or more organizations in order to carry out a specific function, program, or project for which they perceive a need. Regardless of whether the network is based in information exchange or coordinated policy action (Agranoff 2007), need is often the origin of networks. How need manifests itself in the birth of a network varies. Many networks

emerge because of the failure of the governmental or non-profit sector to adequately produce a good or service, in which case the network idea may grow slowly over time and the network may appear destined to eventually arise. For example, as deinstitutionalization occurred in the mental health sector over a period of years, new provider networks were spawned from community mental health centers (Provan and Milward 1991). When various species of fish from the Pacific Northwest were listed over time as endangered, there was an increasing concern that salmon recovery efforts and initiatives by the federal, state, and local governments were operating in isolation. As a result, the Shared Strategy for Puget Sound, a network of governmental, tribal, private sector, and non-profit organizations, was formed to address the problem collaboratively and to plan for long-term recovery.

Other networks are created after a specific, immediate event, such as what commonly occurs during or after a disaster. The Ark-La-Tex Emergency Management Alliance and Regional Planning Committee, a multi-community and multi-state network formalized through interlocal agreements in 2003 after the space shuttle Columbia exploded over the region, is an example of a network created after a catastrophic incident. In California, an emergency collaborative network involving federal, state, and local officials, private agencies, and local representatives was established to address the outbreak of a deadly poultry-based disease (Moynihan 2005). In a case study of the 2000 Fort Worth, Texas tornado, McEntire (2002) found that networked relationships played an important part in achieving an effective response. What are the prospects for success for networks that are born due to entrepreneurship, the recognition of a long-term need, or because of a specific event? Is either more or less likely to be sustained over time? The answer to these questions may be found by looking at the general types of governing structures that are available to the fledgling network. The factors

contributing to the birth of a network may be important to understanding short- and long-term change, but so too are the elements of governance of the network.

Provan and Kenis (2007) discuss three general types of network governance structures. The most common form of governance, and the one that has spawned most theories and observations about collaboration, is participant governance. As Provan and Kenis explain,

When network governance is shared, it is the collectivity of partners themselves that make all decisions and manage network activities... There is no distinct, formal administrative entity, although some administrative and coordination activities may be performed by a subset of the full network. In theory, the network acts collectively and no single entity represents the network as a whole (7).

Such a structure depends entirely (or heavily) on the reciprocal actions of the participants in the network. Goal achievement is determined by the extent to which network relationships are relatively equal and leadership is dispersed and shared.

Another structure through which networks can be governed is a lead organization. Network governance is centralized under this arrangement whereby the lead organization “provides administration for the network and/or facilitates the activities of member organizations in their efforts to achieve network goals, which may be closely aligned with the goals of the lead organization” (Provan and Kenis 2007, 7). In addition to the existence of the lead organization governing structure, previous empirical research in both economic development (McGuire 2000) and emergency management (McGuire and Silvia 2007) has found that the composition and

scope of a lead organization is a significant determinant of the extent of collaborative activity in a network. Case studies of community mental health networks demonstrate that the effectiveness of the networks was based in part on the extent to which the network was coordinated centrally through a core agency, the community mental health center (Provan and Milward 1995). Centralization of network operational functions “appears to facilitate both integration and coordination, something that decentralized systems have a difficult time accomplishing because of the number of organizations and linkages involved” (Provan and Milward 1995, 24).

The third network governing structure identified by Provan and Kenis is the “network administrative organization” (2007, 8). This structure is a separate entity established for the sole purpose of governing the network and its activities. Many of these are non-profit organizations or government mandated agencies. A metropolitan planning organization (MPO), established through an intergovernmental agreement involving numerous local, state, and federal members, is one type of network administrative organization. For example, the Kentuckiana Regional Planning and Development Agency serves as the MPO for the Louisville area, three counties in Kentucky, and two in Indiana (Agranoff 2007). It is comprised of federal, state, and regional transportation officials; local government elected officials; and local government professional staff. While charged with planning and implementation of federal legislation, it also acts as the central coordinating mechanism for all network activities.

As this typology of network governance suggests, networks are not always self-governed and self-led structures. Indeed, networks can take on a number of features more commonly associated with formalized, even hierarchical, agencies. Bardach observes that “interorganizational collaborative capacity is very much like an organization in its own right” (1998, 21). That is, the standard characteristics of a single, hierarchical organization—

formalization, specialization, coordination—are embodied in the ability of agencies to work together effectively. Similarly, Imperial identified what he referred to as “collaborative organizations,” which are “organizations composed of other organizations” that perform a variety of more traditional functions by institutionalizing rules, procedures, and processes into a coordinative organizational structure (2005, 299). A comparative case study of three One-Stop Career Centers in Boston demonstrates that a network management orientation can be self-governed, but also hierarchically-focused and rule-driven (Herranz 2007).

Different networks clearly can possess different governing arrangements, but do networks change governing structures over time? That is, while a snapshot of a network might reveal a participant-governed network, would a longitudinal examination reveal that networks move toward a more centralized structure? It has become a truism, drawn largely from the research of Lawrence and Lorsch (1967) and Thompson (1967), that the most effective organizations match their internal structures and operations with the level of complexity and uncertainty in their environments; the more complex the environment, the more complex the internal structure. Is there a corollary in networks? That is, are there both environmental and network-level characteristics that suggest network effectiveness depends on how well the inner environment adapts to the constraints and opportunities of the outer environment (Simon 1981)? For guidance, perhaps we can look to venerable ideas of organizational structure. For example, size may very well determine the most effective structure; the greater the number of participants in a network, the greater the need for a lead or network administrative organization (Provan and Kenis 2007). Also, the severity of the problem a network is attempting to solve might lead to different forms of network structures: a relatively “tame” problem could be addressed by a smaller, self-governed network, whereas a “wicked” problem such as transportation or regional

economic development may require a more centralized structure. The network structure may also depend on the nature of its required work processes, or technologies. When the primary purpose of a network is information exchange, governance is easily shared across participants and the non-formal group provides all the leadership that is needed for the network to be effective. However, as the scope and variation of network tasks increase, the level of centralization may increase as well.

These hypotheses and ideas about network governing structures can apply not only to voluntary networks, but to networks that are mandated by a third-party, by legislation, or created through the rulemaking process (Hall and O'Toole 2000; 2004). Mandated networks cannot rely solely on interdependent, self-coordinative network processes—"clan" governance—which "calls for the development of shared meaning between actors" (Rodriguez et al 2007). Given that mandated collaboration is essentially a political process whereby one or a few agencies are linked to a central government authority, different governing mechanisms are required instead. Centralized, hierarchical mechanisms may define mandated networks much more accurately than do participant-governed structures.

Questions about why and how particular structures are created or chosen have not been investigated on a large scale. To paraphrase Ring and Van de Ven (1994), "How do public management networks emerge, grow, and dissolve over time?" This is one of the most critical questions not yet studied with any fervor. Indeed, cases of network change are scarce. While there is some empirical research that seeks to explain how networks evolve over time (Gulati and Gargiulo 1999; Isett and Provan 2005), network processes and relationships are the focus in these studies, not network structural dynamics. What is needed is a theory that describes and explains birth, change (when applicable), growth (or lack thereof), and death of a network.

Will such a theory result in a series of network stages along the lines of notions regarding the way that teams and groups develop over time (Kinicki and Williams 2006)? Is there a natural progression of network development that can be identified? And if so, will the progression of stages apply to all networks, whether permanent or temporary, mandated or voluntary? As Downs (1967) suggested regarding the lifespan of bureaus, is there a time threshold at which sustenance of the network is achieved or at least made more likely? Or is the threshold not based in the passage of time but the achievement of network goals and subgoals (i.e., small steps)? These are fundamental questions that can only be answered empirically and largely through longitudinal studies.

In what ways do networks grow and learn? How is knowledge deployed, used, shared and managed?

How important are connections for building knowledge assets based on human capital (Zuboff and Maxmin 2002, 321)? In a classic paper, “The Strength of Weak Ties,” Mark Granovetter (1973) argues that the most important bridges to socially derived information/knowledge defy logic by being based on weak links. These ties bridge “into distant and otherwise quite alien social worlds” (Buchanan 2002, 44). The ties build the connectivity needed for problem solving and creative discovery based on dynamic interventions among people working at strategic points in networks (Cross et al. 2004). These weak links act as critical ties that sew the social network together; the social shortcuts that binds the network.

Networks then become important contemporary means of organized sensemaking (Weick 1995) and managing knowledge, and are “a fluid mix of framed experiences, values, contextual

information, and expert insight that provides a framework for evaluating and incorporating new experiences and information” (Davenport and Prusak 2000, 5). Related to this, knowledge management is directed to identifying, extracting, and capturing “knowledge assets,” in order to direct them towards accomplishing some goal (Newell et al. 2002, 16).

While not all networks are exclusively devoted to knowledge or its management, virtually all seek a collaborative form of explicit and tacit knowledge that supports their interorganizational missions. Explicit knowledge is that which can be codified and communicated easily by documenting in words or numbers, charts or drawings. It is the more familiar form of knowledge. Tacit knowledge is embedded in the senses, individual perceptions, physical experiences, intuition, and rules of thumb. It is rarely documented, but “frequently communicated through conversations with the use of metaphors” and includes know-how, understanding, mental models, insights, and principles inherent to a discipline (Armstrong and Saint-Onge 2004, 41). As the two types of knowledge necessarily interact, its value increases because of its proximity to action, and when combined the knowledge is much more “real world” than raw data or information (Davenport and Prusak 2000). In a form similar to that of organizations, networks rely on knowledge development/management processes, blending information with experience, truth, judgment, and rules of thumb.

How do partners in networks grow and learn as they steer knowledge toward problem solving? Feldman and associates (2006) suggest that ways of knowing on given issues must be continuously renewed, even those enduring ideas, because they are active and ongoing. “We suggest that the fluidity of knowing an issue is an opportunity for public managers to use inclusive practices to facilitate deliberation.” As such, “boundary experiences, boundary objects and boundary organizations bring together different ways of knowing and create opportunities

for new ways of knowing to emerge” (89).

Koppenjan and Klijn (2004) suggest that in networks, knowledge uncertainties focus on the process: “Interaction processes are considered to be searches wherein public and private parties from different organizations, (levels of) government and networks jointly learn about the nature of the problem, look at the possibility of doing something about it, and identify the characteristics of the strategic and institutional context within which the problem solving develop” (10). It involves process management strategies that try to change and reframe perceptions of the problem (Klijn 1996). Agranoff and McGuire (2001) identify a network interaction sequence as including the behaviors of activation, framing, mobilizing, and synthesizing. Network processes are organized around similar joint learning and problem-solving sequences (Senge 1990). As Innes and Booher (1999) indicate, a learning environment encompassing discussions that lead to shared meaning brings out added knowledge, or “good answers through process” (5). The key knowledge-base for network knowledge-seeking processes is the search for new possibilities. Community development experiences, for example, involve this kind of interactive discourse: “The issue is to bring about enough cooperation among disparate community elements to get things done” (Stone et al. 1999, 354).

Informed decisions related to a course of action are normally placed within a context of diffused and processed knowledge (Mossberger 2000). Knowledge management in one study of 14 networks reveals a logical sequence of growth and learning (Agranoff 2007), which transpires while network actors engage in the problem-solving process. The knowledge management work thus is parallel to their search processes, from activation through synthesizing: looking at extant data, developing own-source knowledge, creating practical vehicles, developing knowledge-based problem solutions, and using information technology for all phases of knowledge

development.

Can network collaborative processes be informed by what goes on in single organizations? A great deal of what is known about knowledge management in networks does come from collaborative processes within organizations. They are presumably highly similar processes. For example, most of the real work within networks is by interorganizational work groups or task forces that combine technical expertise, program knowledge, and political feasibility into collaborative knowledge. These are familiar to us as “communities of practice,” which are self-organizing systems that share the capacity to create and use knowledge through informal learning and mutual engagement. Wenger (2000) believes that communities of practice manage knowledge if they are internally supported as social learning systems by promoting the crossing of boundaries, encouraging learning, supporting community infrastructure, and fostering belonging.

The positive energy that epistemic communities bring to network learning activity is also instructive. Epistemic communities are groups of persons working in the same area, representing a variety of disciplines, and sharing normative and principled beliefs that provide a value-based rationale for social action. Moreover, community members have similar causal beliefs, notions of validity, and common policy outlooks (Haas 1992). Epistemic communities can facilitate the production of consensual knowledge as they can have considerable, even disproportionate, effects on organized learning and behavior, even if they are not among the more powerful decision makers. As Thomas (2003) suggests, they “are well situated to provide a driving logic for cooperation” (41). Such communities are very important in creating knowledge-based agreements in natural resource and environmental networks (Imperial 2004; Koontz et al. 2004; Thomas 2003; Wondolleck and Jaffee 2000).

How does one implement knowledge management in a network? McNabb's (2007) findings with regard to implementing knowledge management at the U.S. Department of State appears to hold for networks as well: 1) recognize the benefits of knowledge management to the organization, 2) ensure organization-wide support, 3) appreciate the cultural barriers to knowledge management success, 4) build knowledge management communities, and 5) use information technology to support knowledge management (90). Along these same lines, Eglene, Dawes, and Schneider (2007) found that success in public sector knowledge networks depended on political and organizational support, supportive leadership, and communication strategies, as well as "adaptive leadership based on learning" (109).

Finally, many knowledge workers in organizations and virtually all participants in networks are what Davenport calls (2005) "knowledge creators," as opposed to those who find, distribute, process, or only apply knowledge. Like authors and researchers, managers and technical specialists use their knowledge to find new and creative solutions. In public sector networks this often includes having to deal with second and third order effects (O'Toole 1997). Managing human resources, Davenport (2005) maintains, involves several emergent approaches: moving from oversight to participation, organizing hierarchies instead of organizing communities, moving from hiring/firing to worker retention, building knowledge rather than manual skills, assessing invisible knowledge skills rather than evaluating visible job performance, building knowledge-friendly cultures, fending off bureaucratic impediments, and relying on a variety of human resources instead of internal personnel only. Most would appear to apply equally to network management.

Since these processes carry over from organization to network, we must recognize that managing knowledge is a core function of public sector networks. Koppenjan and Klijn (2004)

point out that a normal first response to policy uncertainty in public networks is information collection. It is often challenged by the various parties and stakeholders involved in the network, and new complexities are then raised. Thus the knowledge management process begins.

How do network participants respond when the network “hits a wall?” What are the barriers, the “pulls and drags” on network operations, and how can/do networks overcome them?

Working collaboratively through networks often times connotes images of some interactive nirvana, where nothing but “love and kisses” prevail in sort of a soothing hot tub atmosphere. Every agency/organization represented is assumed as more or less equal, goal agreement emerges automatically based on shared norms, and investigation leads to a strategic-based agreement, to be followed by problem solution (Buchanan 2002). While this type of harmonious atmosphere may well prevail in some cases, the reality can also be the opposite: acrimony, power domination, disagreement over aims, difficulties in reaching agreement, and lack of ability to make solutions work. This is the other side of network management, so to speak, where real obstacles to network operations often prevent any level of collaborative success. Network management must also account for and learn to deal with these atmospheric realities. How can networks overcome these forces that thwart collaboration?

An initial conceptualization of this network problem recognized that power may not only be unequal (Agranoff and McGuire 2001) but that an array of organizations exist with one another in a power dependence relationship. Others such as Rhodes (1997) argue that organizations depend on each other for resources and therefore enter into exchange relationships, where they maneuver with one another. Power dependence explains why different entities

interact and explains variations in the distribution of power within networks. Rhodes (1997) goes on to say that such entities are usually controlled by dominant coalitions, employing strategies within the rules of the game to regulate the processes of exchange. In this respect, power can be seen both as a force to facilitate or to hinder network processes. As a blocking force, agency/organization power is very real when lead organizations serve to keep certain problems off the agenda, withhold support for key network strategies or decisions, or withhold required agency-controlled resources. These are the key power-dependence barriers to network results.

How might they be overcome? Bargaining has previously been advanced as a solution to such impasses (Agranoff and McGuire 2003; 2004; Rhodes 1997), but more is now known about power. In networks, there also are internal sources of power once the network is activated. Agranoff (2007) found power within the network to be divided among champions, agency managers, technical experts, and staff members. These individuals bring to the networks not only their agency's resource-based power, but also their willingness to make the network succeed in solving difficult problems. In this process, human capital based technical knowledge and the important internal resource of carrying out needed tasks also contribute to overcoming raw agency power. In a similar vein, Thomas (2003), following the literature on professionalism (see Wilensky 1964), argues that interagency working specialists receive many of their incentives from external groups and fellow practitioners outside of the agency. Many form knowledge-based communities that "cohere around ideas" (Thomas 2003, 47). Working together on a continuous basis in solving problems that they similarly define can serve to overcome power brought by the agencies (see also Wondolleck and Jaffee 2000).

A closely related issue to resource bases is the force of agency turf. Bardach (1998)

defines turf as “the domain of problems, opportunities and actions over which an agency exercises legitimate authority” (164). Agencies can try to protect their turf by fashioning distinctive competencies, and/or managers may resist collaboration to protect their autonomy. Thomas (2003) suggests that agency managers: 1) may be convinced that they know best, and therefore decide how to carry out agency tasks; 2) seek to control one’s own space in order to avert loss (or failure) in new territory if it involves perceived loss of control; 3) seek autonomy, which reduces uncertainty, and 4) must be careful not to encourage too many threats to these conditions. Turf can clearly block network action.

How can turf barriers be overcome? Various mechanisms are available. For example, cooperation strategies like contractual relationships, cooperative agreements, coordinating councils, and joint ventures can overcome some protective fears (Mandell and Steelman 2003). The practice of networks leaving program administration to partner agency services (Agranoff 2007) is another means of overcoming turf. Most important, Koppenjan and Klijn (2004) point to three key managerial strategies to “managing content” that shift from barriers like turf to common ground: 1) avoidance of early fixations, which furthers awareness of the plurality of perceptions and preferences; 2) furthering substantive variety and favorable conditions for learning and intermediate adoptions; and 3) joint image-building and a search for common ground for joint interactions despite recognition of enduring differences (162). Clearly, there is no guarantee of success in eliminating turf, but the implication is that investments in process can reduce its most pernicious impacts.

Does extensive processing have its own tradeoff costs in preventing network outcomes? In what is known as collaborative inertia, it often does. Huxham and Vangen (2005) identify inertia as the other side of network success, that of collaborative advantage. This lack of

collaborative advantage occurs when collaboration is marked by slow progress, painful experience, lack of achievements, and sometimes network collapse. They point to many different social forces that lead to collaborative inertia. One is mixed aims or intentions, when partners sit down to collaborate and find out the complexities between explicit, assumed, and hidden aims. These occur on three levels: collaborative, partner organizations, and individual actor aims. Another is the dominance and power generated by those partners who hold the purse strings. Then there is the other side of trust, suspicion, which can be generated by lack of collaborative trust-building. One related process dimension is what they call “partnership fatigue” and a lack of clarity about with whom one is collaborating (72). Constant change can also lead to inertia, as relationships between partners become increasingly fluid. Displaced leadership, which is a shift from the expected group-oriented, task-focused, give and take to having one or a few leaders do most of the work, make the collaboration “move out of the control of their membership” (78). Finally, leadership activities are continually facing obstacles to success and removing them in a less than collaborative fashion (e.g., pushing partners out, isolating agencies) in a sort of collaborative thuggery as a substitute for process facilitation. Huxham and Vangen (2005) conclude that finding ways to avoid collaborative inertia is an essential part of network leadership, requiring the adjustment of styles to ensure that the agenda moves forward, and sometimes calling on the “need to lead even when you are not in charge” (225).

Once in the throes of moving the collaboration agenda, are there also “process costs” that need to be taken into account? Agranoff (2007) found that network participants think a lot about the time and opportunity costs taken away from organizational management or technical work. Countless person-hours are spent in task forces or work groups that add to the more formal

plenary partner meetings. Even when collaborative inertia is somehow overcome, it nevertheless comes at the expense of protracted human relations processing, as partners try to respect the multiculturalism of network efforts. Consensus, the major mode of decision-making, means letting everyone put their agenda on the table as networks unpack complex political, financial, technical, and regulatory issues. Because of the drive for consensus, and the practice of respect for partners' risk averse agendas, problem resolution can narrow the scope of work. Networks that have high numbers of conflicting or potentially conflicting stakeholders tend to be more sensitive and risk averse when it comes to the problem agenda. When combined with the previously identified barriers such as of the exercise of power, the potential to withhold resources based on power-dependence, collaborative inertia, and agency turf, process costs can be real obstacles to solutions. In many ways they can be overcome by developing realistic agendas, respecting agency expectations, and focusing on results by broad participation.

The agendas and policies undertaken by networks present perhaps the most significant barriers to collaborative results. The scope of the network may be so narrow or limited that solution-oriented actions are circumscribed. O'Toole (1997) was one of the first to recognize that administrators working within networks "should not assume that they possess authority" (48). Many networks simply do not possess the authority to act on the problems they set out to address. Agranoff's (2007) typology of networks indicates that some networks have no authority, even to jointly program; they merely exchange information. Other types of networks engage in information exchanges plus try to build partner knowledge-related and problem-solving capabilities. Another network type gets involved in problem solving approaches, albeit indirectly, as they blueprint strategies that are followed by service clients as they directly approach client agencies. The final type does hold the power to make some network decisions,

using their consensus process to take direct actions. Nevertheless, for this latter group, their legally ascribed powers were quite limited in scope and their policy adjusting ability was circumscribed compared to the partner agencies retention of major powers, particularly the public agency partners. For the other three types of networks, any deliberative results were normally long-term and in the decision hands of other government agencies or commissions. Such networks can only influence, not decide on, a given policy adjustment or program direction. Thus, only under limited conditions and situations do networks "...have the formal wherewithal to compel compliance with such cooperative undertaking" (O'Toole 1997, 445).

What about the obstacles presented by public policy provisions? This is an often overlooked but quite obvious obstacle to collaborative outcomes, as network participants frequently face policy barriers. These can prove to be among the highest and strongest brick walls of network management. These barriers arise because, as Börzel (1998) maintains, when horizontal coordination between organizations is based on bargaining between partner organizations, the representatives are not completely autonomous; they are subject to the control of their organization. In the case of policy making, that would also include direct policy makers, for example state legislators, members of Congress, and elected/appointed executive officials. For example, state-level networks that deal with integrating the mentally handicapped in community settings depend heavily on federal Medicaid funding of different types, but eligibility, funding rules, and funding allocations are made by the U.S. Congress, the respective state legislatures, and state executive offices. These public officials are reluctant to expand funding of home and community services exclusively because of unknown cost and potential fraud fears. No network of state agencies, community providers, and industry associations can turn this reluctance to expand Medicaid around. The same would be with regard to the numerous

state-level rural development networks that have emerged. They rarely can launch new program efforts because of “policy ownership elsewhere.” They are circumscribed by governor’s offices, state economic development agencies, state legislation, and the state-based offices of the largest funder, the U.S. Department of Agriculture/Rural Development (Radin et al. 1996).

Substantive policy barriers placed in the way of network solutions, whether funding or program, cannot easily be overcome by network action. Klijn and Koppenjan (2004) remind us that one must avoid the theoretical presumption “that governments are like other actors. Governments have unique resources at their disposal and work to achieve unique goals. They occupy a special position...” (151). Chief among these are decision authority, budgets, personnel, and democratic legitimization. The way that networks normally deal with (not overcome) these policy barriers is by involving the real decision-makers or their representatives into the negotiating mix of the network and reaching reconciliation of interests. “Such informal linkages, based on communication and trust, overlap with institutionalized structures of coordination and link different organizations independently from the formal relationships between them” (Börzel 1998, 262).

How can/do networks measure outcomes as opposed to measuring effectiveness with purely process, output, or perceptual measures?

In a public sector faced with demands from the public for agencies to attain high performance and program effectiveness, public management networks cannot escape the “How good?” question posed by Bardach (1998). More and more researchers assert the need to assess whether networks actually work, under what circumstances they work, and whether governing is

improved as a result of using networks. Research on networks has blossomed recently, but some argue that what is missing is “an examination of the relationship between interorganizational network structures and activities and measures of effectiveness” (Provan and Milward 2001, 414). As Bardach claimed a decade ago when networks and collaborative management were starting to emerge into the consciousness of management scholars, “the literature is concerned mainly with the question of whether collaboration exists, and on what scale, but not with whether the collaboration is productive” (1998, 23). During the same era, O’Toole (1997) implored researchers to study “networks as causal forces in the administrative setting, particularly regarding effects on the traditional concerns of public administration, such as efficiency, effectiveness, equity, responsiveness, and responsibility” (49). Agranoff and McGuire (2001) hypothesized that “decisions made in networks may simply be better decisions...in the sense of being more effective...” (321). Even while the field of public management network research continues to hone its terminology (“what is a network?”), conceptualize and reconceptualize different types of networks (“what is its purpose?”), and develop empirical measures (“who is involved and why?”), the drumbeat for answering the effectiveness question remains.

It is reasonable to assume that public management networks are goal-oriented structures. Participants in the network work to achieve their individual organization’s goals as well as a shared, collective goal. As in any management structure, the goal itself may be different across organizations and networks. Empirical research has shown that the intended goal of networks varies according to network task and purpose (Agranoff 2007). However, the typical context for networks is that they are held accountable by a constituency for the satisfactory design (in some networks) and delivery of goods and services (McGuire 2002). Effectiveness can thus be measured by the extent to which a network achieves its goals, whatever the goal is and however

it has been formulated.

Two difficulties with assessing goal achievement and the overall effectiveness of networks are associated with a longstanding issue in public management: how to measure and evaluate performance, and what to do with that information. How do we know when and if management matters, and how can this knowledge benefit us? Some take a cautionary tone toward the performance management “movement.” As scholarly experts in managing performance attest, “improved efficiency and productivity are frequently stated goals, but in many cases linking improvements in either one to specific changes in government—or to attributes of government—is difficult” (Hou et al. 2003, 296). Radin (2006) and others argue that the public sector does not easily lend itself to developing outcome measures. However, since “everyone is measuring performance” (Behn 2003, 586), networks are not immune to this practice and, perhaps, shouldn’t be.

It is tempting, but unfitting, to divorce the network’s performance measures from the policy from which an implementation network or networks were spawned. Policy making occurs within, and in many ways is defined by, a political context. To establish specific effectiveness measures for a network and then attribute the achievement or non-achievement of the measures solely to the activities of the network is not consistent with decades of policy research. Effective programs depend to some extent on the availability of adequate budgetary and other resources. For example, a public health implementation network may include a number of private and non-profit providers, all delivering quality services to their consumers, but funding for the program is not unlimited. Thus, there may be many people in need of services that cannot get them due to the funding shortfall. The network participants are succeeding in their roles and at their jobs, but the program could be viewed as unsuccessful because of the many potential consumers who are

“left out” of the services. What outcome measures are chosen to assess the performance of the network? If an implementation network is charged with providing services that are grossly underfunded to begin with, the cards are stacked against the program succeeding. But can a network be “successful” within the context of an unsuccessful program? Can there be a “good” network but poor program outcomes?

This question can be answered in the affirmative if successful process within a network is a valued societal outcome. When the community and all stakeholders to an issue are engaged in designing, planning, and implementing a program, and when participation, representation, and deliberation are intended to be the defining characteristics of the process, then the effectiveness of the program as measured in terms of standard indicators of performance may fall short. Are such networks to be devalued? That is, at what point does program performance transcend the network itself?

In a fascinating longitudinal, multiple case study of mandated collaboration among public health care organizations, Rodriguez et al. (2007) offer three alternative “readings” of the events and processes that transpired over the four year study period. One explanation for the failure of the collaboration attempts is derived from a “managerialist” perspective whereby the role of governing mechanisms is assumed to be the primary determinant of success and failure. From this perspective, adopting at least a minimal set of rules, providing coordinative tools, and working within a defined governance structure can increase the chances of success (and, by extension, lack of these can contribute to failure). This instrumental, administrative-oriented view of collaborative networks is the dominant theme in many discussions of network effectiveness (McGuire 2002), and is consistent with the managerialism that underlies performance measurement.

As an alternative to the managerialist perspective, the authors also expound on what they refer to as a “symbolic” perspective that notes the intrinsic value of process (Rodriguez et al 2007). Even in the midst of processes that were destined to fail due to structural and financial shocks to the health care system, the participants to the collaboration continued because “the processes themselves has some intrinsic value to the people who participated in them” (178). The interactions and negotiations that constituted the collaborative process may have “socialized participants to a new language (e.g., case management, integrated networks) that might be drawn on more successfully in future discussions” (184). While perhaps unsatisfying as a measure of effectiveness within the context of a single program, the long-term building of social and political capital within this public health field could lead to positive outcomes in future iterations of the program. New networks, new institutions, and new mechanisms of discourse (Bryson et al. 2006) could emerge over time; these “third-order effects” of collaboration (Innes and Booher 1999) contribute, ultimately, to successful outcomes.

Rather than assess networks with a single measure based in the outcomes of a program, it may be more appropriate to use multiple measures and examine multiple levels of the network. Provan and Milward (2001) offer such a framework for evaluating community-based public sector networks. Their primary argument is that an evaluation of a network must allow for the fact that various stakeholders involved in the network evaluate its effectiveness using multiple criteria, and different constituencies expect different outcomes. These constituents are principals, “who monitor and fund the network; agents, who work in the networks both as administrators and service-level professionals; and clients, who actually receive the services provided by the network” (416). The relationships between principals, agents, and clients result in differing assessments of effectiveness by the community, the network itself, and the

organizations that are part of the network. Thus, while networks should be evaluated, they “cannot be evaluated solely on sustainment of particular programs, agencies, or network forms. Rather, the task for network organizers is to minimally satisfy the needs and interests of stakeholders at networks and organization levels, while emphasizing the broader needs of the community and the clients the network must serve” (422).

Ultimately, in spite of the value of evaluating network in terms of process or long-term value, the question comes down to whether networks are effective structures for achieving positive program outcomes, that is, achieving goals. Some empirical studies find an association between networks and positive program outcomes, but effectiveness is measured differently in the studies. Provan and Milward’s (1995) comparative case study of four community mental health systems examined the relationship between implementation networks and effectiveness, which they defined as “the degree to which clients and their families were satisfied with the treatment they received from the community mental health system” (Milward and Provan 2003). For that study, perceptual measures of satisfaction were used to assess network effectiveness, which may not address program outcomes. In an effort to determine the contribution of management to policy outcomes, O’Toole and Meier (1999; Meier and O’Toole 2003) place network management within the context of a general model of public management. Analyzing a dataset of more than 500 Texas school districts over a five year period, the authors find that, in addition to management of the school district itself, network management as practiced by superintendents is a significant determinant of performance. In contrast to Provan and Milward, the research uses a measure of an intermediate outcome as the dependent variable (achievement test scores), but it’s not clear that the measure of network management is in fact just such management (McGuire 2002).

In the face of the difficulties of agreeing on performance measures and empirically estimating network contributions to performance, has determining the effectiveness and performance of networks become the siren song of twenty-first century public management research? That is, has research on networks advanced to the point yet that program outcomes can be determined by their structures and actions? If we are to assert the value of networks as administrative alternatives, then yes, outcomes must be included as the ultimate dependent variable, in spite of the conceptual and empirical roadblocks that presently make such an undertaking so challenging. In order to do so, models of effectiveness should include: (1) accurate and appropriate descriptions of the network; (2) a thorough accounting of the actions involving both “management of” and “management in” the networks (Milward and Provan 2006); (3) a recognition of the political and social context within which the network operates; (4) measures of intraorganizational management, when relevant; and (5) outcome measures that are agreed upon by network participants and their constituents. While fraught with difficulties, the next frontier of network research must focus on when and why it is effective to employ networks in public management.

What is the relationship between networks and government agencies? How do networks and bureaucracies function? There are clear political and legal limits on public networks, but such networks emerge despite these parameters. How do networks operate, sustain themselves, and sometimes succeed if they are so limited?

These questions relate to the boundaries between the state and networks, and for that matter, most other vehicles that represent governments, including nongovernmental collaborative

devices/agents such as grantees, contractors, and partners. We are looking at the function and role of government vis a vis governing in this era of governance. Unlike the earlier focus on government, which is the repository of constitutional frameworks, laws, regulations and the institutions that frame, execute, and adjudicate them, governance refers to the mix of all kinds of efforts by public and private actors, in different modes and orders. Governance involves a shift or change in the role of government, not the elimination of government itself. In the words of Kooiman (2003):

Governing issues generally are not just public or private, they are frequently shared, and governing activity at all levels (from local to supra-national) is becoming disused over various societal actors whose relationships with each other are constantly changing. There has, judged against traditional public governing activities, been an increase in the role of government as facilitator and as co-operating partner. As such it is more appropriate to speak of shifting than of shrinking roles of the state. However, a reshuffling of government tasks and a greater awareness of the need to interact with other societal actors does not render traditional government interventions obsolete. It merely implies a growing awareness of the limitations of traditional governance by the state on its own (3).

Contrary to the belief of some, particularly consultants and popular writers who would like to write off or eliminate governments' roles (Osborne and Gaebler 1993; Osborne and Plastrik 2000), or academics who see the state as hollowing out (Milward, Provan and Else 1993; Rhodes 1997) or weakening at the core (Keating 1999) and losing its boundaries through disarticulation

(Frederickson 1999), the era of governing implies that we understand how governments work differently, a subject about which a great deal more must be known (Milward and Provan 2000).

How do we understand the existing boundaries of the state? From a public management and governance perspective one can answer this type of question if one looks to two contemporary approaches: the tools of government and conductive bureaucracy. With regard to tools, rather than eliminating bureaucratic agencies, their emergent working instruments must be understood as the transactional DNA of government and its interlocutors. They include not only grants, contracts, regulations, and standard procurement of goods and services, but services partnerships, joint ventures, loan, loan guarantees, insurance, tax sharing and tax expenditures, vouchers, and cost reimbursements. Salamon (2002) calls for a shift in the unit of analysis in policy analysis and public administration from the public agency or the individual public program to the distinctive *tools or instruments* through which public purposes are pursued. It implies, as he concludes, loss of ability for exertion of complete government control over the operation of its programs, leading to complex exchanges broadening the focus to “networks of organizations” differentiating itself not only from traditional bureaucracy, but also from “privatization” and “reinventing government” perspectives. The new governance, by contrast, “shifts the focus of attention much more explicitly from the internal workings of public organizations to the networks of actors on which they increasingly depend” (12). From a public administration standpoint one needs to know how these tools are used in management, not just their possible input on policy. Peters (2000) has suggested that the analyst is now required to think about a three way matching: the instrument or tool, the policy problems, and the managerial technique. The role and functions of networks of actors are then to intermediate policy tools with government agencies over policy. A broader understanding of this

phenomenon will help define network-state boundaries.

The second approach is that of the changing nature of government in a governing era. Clearly public organizational structures have become more flexible as well as permeable over the twentieth century (Clegg 1990). They have had to in order to face the governing overlay on its traditional functions of planning, organizing, staffing, budgeting, and so on. In this less traditional sense, public organizations are no different than many non public organizations in that they have become conductive. Armstrong and Saint-Onge (2004) define the conductive organization as: “An organization that continuously generates and renews the capabilities to achieve breakthrough performance by enhancing the quality and flow of knowledge and by calibrating its strategy, culture, structure and systems to the needs of its customers and the marketplace” (213). Obviously addressed primarily to business organizations, Armstrong and Saint-Onge address numerous organizational processes, including the importance of creating partnerships through internal-external interaction, building alliances and coalitions, forming and re-forming teams across functions and organization boundaries, and collaborating to actively manage interdependencies:

The capability to effectively manage complex partnerships is growing in importance as organizations are reconfigured. Organizations are becoming more and more involved in complex value-creation networks, where the boundaries between one organization and another become blurred and functions become integrated. It’s becoming a critical organizational and leadership capability to be able to create and leverage participation in network-designed and -delivered solutions (191).

In such organizations, it is usual for the professional and managerial staff to collaborate, learn, share, and jointly execute their responsibilities. In the same way, many of today's public administrators experience this type of connectivity in dealing with the tools of governance.

How to conductive agencies operate the tools of government? From a boundary perspective we know that networks do not operate with the same service bureaucracies that were characteristic of an earlier era. A great deal of evidence from the environmental policy area clearly indicates this (Bryner 1993; Church and Nakamura 1993; Koontz and Thomas 2006; Weber 1998). In addition to internal operations, environmental agencies use a variety of tools over which their conductive agencies do not control the external entities that it deals with, but nor are they controlled by these agencies. Each party has its legally or contractually chartered mission, roles, and rules. Their joint efforts come at the margins, not the core, of each party, although both sides must be willing to work with one another to smooth the flow. These conductive bureaucracies are public agencies and nongovernmental organizations that are also dependent on their external clientele and, by the same token, their external clientele are dependent on them. Conductive bureaucracies also have core operations and are ordinarily legally chartered or registered as profit or non-profit corporations, giving rise to high connectivity.

Connectivity does not mean the complete elimination of the core functions of the bureaucracy. Normally it is the service delivery or operations functions that are shifted to either another government in the intergovernmental system and/or to a nongovernmental agency. Meanwhile, the bureaucracy shifts some of its operations to more conductive-oriented functions. An example is the role of state agencies on aging that administer the pass-through Title III funds to area agencies on aging, which in turn contract with providers for services. What do the state

units do? They develop operational plans within federal regulations and guidelines; negotiate grants upward and downward; monitor grants to area agencies; collect and analyze program and fiscal data; report, monitor quality and frequency of services; check the appropriateness of area agency subcontracts; meet and oversee state purchasing and travel standards; prepare for federal post-audits; and engage in literally thousands of bilateral and multilateral connections with the feds, area agency personnel, and contractors. All of this while they are internally planning, staffing, organizing, and budgeting for the agency itself. Thus the bureaucracy does not disappear, it shifts roles to the more connective activity of the governing era. In this sense, the networked agency is at the boundaries of the state in many involved ways, but almost always with some conductive bureaucracy.

Within these important contexts of conductive bureaucracies that employ governance tools, it is difficult to conclude that networks in any substantial way are replacing government agencies, or controlling them to any notable degree. They may exist in some bargaining or agent relationship, but that neither implies replacement or measures of authority over them. There remain too many legal and normative obstacles to conclude that there is some end of bureaucracy in the era of the network.

First of all, networks are not the totality of collaborative relations. Research has indicated that dyadic or bilateral contacts are more frequent and often more effective (Agranoff and McGuire 2003; Meier and O'Toole 2001, O'Toole and Meier 2006). Second, managers in bureaucratic organizations do not report that the bulk of their work is within networks and thus outside of the agency. Most of their work, up to 80 percent of time and effort in some studies, is within the agency working on the newer types of tasks illustrated earlier (Agranoff and McGuire 2003; Agranoff 2007; Thomas 2003). Third, not all networks are in a position to substantially

impact the work of government in a very direct way because they are not set up to make the kind of policy/program adjustments sometime attributed to all of them (Börzel 1998; Kickert, Klijn and Koppenjan 1997). Agranoff's (2007) study of 14 networks found only four networks that completely fulfill this role, three that indirectly blueprint such accommodation strategies, whereas the other seven either exchanged information only or performed this function and also built partner capabilities, and thus did not directly engage in policy/program questions.

Some research on networks does indicate that government based lead agencies can have important impacts on network structure and effectiveness. Provan and Milward's (1995) study of four mental health service networks found that integration was most successful with a single core agency than with more dense, decentralized networks. On the other hand, a more recent study by Graddy and Chen (2006) questions the effectiveness of lead government agencies in terms of their ability to promote joint decision-making or increasing a community's capacity for problem-solving. Likewise with regard to knowledge networks, greater success is augmented by the support of high level government officials (Elgene, Dawes and Schneider 2007). Many networks depend on government leaders who were network champions and top government agency heads who form the "political core" of the network (Agranoff 2007).

Moreover, each of these studies demonstrates that government is in the network, which has important implications for where the boundaries might lie between government agency and network when it is not a passive receptor of managerial and/or policy input. Beyond rhetoric about the loss of agency domain, not a lot of research has been done in this area. Berry and Brower (2005, 11), for example, remind us that "we should continue to ask who creates the goals of these (collaborative network) activities and how desirable outcomes are identified and disseminated. In short, does the warm glow of successful collaboration among those at the table

distract attention from who is at the table?” Agranoff’s (2005) study of economic development at the state level found that public agencies can exert important roles in “creating the goals of their non governmental partners,” including: exercising executive leadership in mobilization, working as network promoters, being network brokers, helping network agencies develop collaborative capacity, making strategic public resource investments, providing technical assistance, and assessing the value-adding dimension of collaboration (see also Eisinger 1988; Fosler 1992). The Radin et al. (1996) study of state rural development councils concluded that because of dominant leadership roles taken by important state and federal agencies such as state economic development departments and the state program of the federal USDA/Rural Development, the networks rarely become involved in new funding initiatives or in changing rural policy. “To make or change policy or to seek additional funds could easily be perceived as encroaching on the turf of these agencies. Helping these agencies facilitate regulatory problems or with grant programs, or to provide information, or to demonstrate a new approach appears much less threatening” (203).

This suggests that perhaps the other roles that networks play—sharing information, capturing knowledge, and building partner capacities—as well as programming and making policy/program adjustments, are not only less threatening to agency domain but also push the boundaries of the state in a much gentler fashion. For a great number of administrators and specialists who are network activists, the impact of network on the “legal, policy, or program roles that governments play” (Agranoff 2007, 198) is influential but conditioned by the limited scope of their network’s domain (e.g., only information exchange), the legal and political jurisdiction of powerful partner agencies, the political clout of key stakeholders (e.g., landowners in watershed networks), and most important, the legally mandated limits placed on key agencies’

financing and program actions.

Under these circumstances there is more influence than control of agency domain, by shifting attention to problems, providing new evidence, altering priorities, moving agency personnel out of their silos, and having some long-term or indirect impact on policy and program changes. The exceptions to these limits occurs with those networks that directly engage in policy and program accommodations, either informally by tacit agreements where the impact on agency change could be substantial and relatively direct, or by those who were given the legal power to make changes among partners.

The use of various governance tools in networks may be changing the role of the state somewhat, but one must look more at the margins than its core. Hirst (2000) reminds us that only government can pull together the various strands because it continues to distribute powers and responsibilities, remains the focus of political identity, and is the main institution of democratic legitimacy. Put another way, Michael Walzer (1998) argues that despite the emergence of networks of associations in civil society those networks cannot dispense with the agencies of state power. "...the state itself is unlike all other associations. It both frames civil society and occupies space within it, fixing the boundary conditions and the basic rules of associational activity..." (138). In this regard, we must remember that the state's agencies are not set apart from the network, but are essential parts of them, and also that "*government is not just another organization*" (Sharpe 1986, 177). It is in this context that we must see networks as one of the emergent management entities of governance, but far from the be all and end all of governing or some replacement for government.

Is there a best method for studying networks? What is gained and lost by utilizing different

research approaches?

As in any field of social science inquiry, scholars employ a number of different approaches and methods to the study of public management networks. Whether the empirical research generates or tests hypotheses, uses qualitative or quantitative data, or employs small-n studies or large-n studies, the contributions made to our understanding of networks come from many different circles. Is there a “right” approach?

Daft and Lewin (1993) argued nearly fifteen years ago that the emergence of new organizational forms, the definition of which included networked organizations, requires new forms of empirical research that move beyond “testing normal science research hypotheses” (iii).

Given the overwhelming changes taking place in organizations and their environments, how can scholars contribute to knowledge? We believe that scholars who have been following traditional research paradigms need to adopt a new mindset for research into new organizational forms. We believe that at this state of theory development, research on new forms of organization requires a new approach, quite different from research typically published in academic journals. This work will be characterized by midrange theory and method, grounded research, and research that does not presume to test hypotheses empirically (ii.)

The issue for network scholars in the 21st century is whether networks constitute so new of a form that non-traditional research is required. We believe it depends on the research question.

As noted earlier, the field is just now starting to solidly conceptualize the meaning of “network” and adequate measures are starting to emerge. One methodological technique for describing a network has been around since the 1930s, but that still captures the allure of modern day scholars (Berry et al. 2004), is the sociogram, which is a depiction of a network using a collection of nodes connected by lines. The utility of the sociogram is its ability to identify patterns of interaction in a network. More sophisticated analyses of network connections can be performed using such software as UCINET and Pajek, which can decipher roles and cliques, and compute multiple measures of network dynamics. Social network analysis has become popular in private sector research as a means to reveal patterns of connectivity in specific functions and business units that cannot be adequately described with an organizational chart. The advantage of social network analysis is sorting out “who works with whom” and the scope of these connections, which offers a powerful way to describe an organization.

The applications of social network analysis are not to be found solely in single organizations, however. Social network analysis can also be used a tool for providing valuable “diagnostic” information about a public management network. For example, such analysis can allow researchers to decipher information flow and knowledge transfer, recognize blockages in communication, identify central people on whom a network may rely for expertise and knowledge, assess how a network is integrating the core members of the network (e.g., political, technical, financial), and determine whether the appropriate collaborations are occurring to support performance objectives (Cross and Parker 2004). Social network analysis can isolate breakdowns in information flow—information bottlenecks—and identify untapped and valuable expertise in a network. It can expose excessive connectivity, revealing potential sources of power and influence and demonstrating who may have the largest hand in shaping the evolution

of the network (Powell et al. 2005). On the other hand, social network analysis can also reveal that even peripheral actors can exert some influence over network operations and outcomes (Stevenson and Greenberg 2000). Although few analytical techniques offer such opportunities for empirically describing and explaining activity in a network, integrating the results of this type of analysis with fully specified models of network effectiveness remains a challenge.

The study of networks may demand more grounded research deeper inside the black box than social network analysis can reach. Strauss and Corbin (1998) describe grounded theory by stating,

A researcher does not begin a project with a preconceived theory in mind (unless his or her purpose is to elaborate and extend existing theory). Rather, the researcher begins with an area of study and allows the theory to emerge from the data...Grounded theories, because they are drawn from data, are likely to offer insight, enhance understanding, and provide a meaningful guide to action (12).

It is important to point out that “grounded” does not mean non-systematic and anecdotal. On the contrary, one example of the use of grounded theory is based in a “qualitative but positivist systematic” comparative case analysis (Agranoff 2007, 37). Others have used the comparative case method to draw conclusions regarding network structure and performance (Herranz 2007; Imperial 2005; Provan and Milward 1991; 1995). Qualitative research through comparative case studies can provide insight that quantitative research cannot offer (Agranoff and Radin 1991). Models of network performance drawn from case studies can include accurate descriptions of the network, a thorough examination of the actions and interactions of network participants, a

concern with network context, and, where relevant to the research, causal connections to outcomes. Observation of managerial behavior is another such mechanism for more accurately documenting how managers match behavior with environmental constraints, as is interviewing of managers (McGuire 2002).

On the other hand, comparative case study analysis, even with a relatively large number of cases (Agranoff 2007), still is not able to offer truly generalizable studies that large-n, quantitative studies can do. One way to move toward a greater understanding of the role of networks in program performance is to develop a general management model and then isolate those factors that are network-specific. Many scholars have tested a formal model developed by Meier and O'Toole (2001) with performance data from Texas public school districts. The variable conceptualized as "network management" in the model is measured as the level of interaction between the primary network managers, the superintendents, and five (with subsequent analyses including eight) sets of actors from the school districts' organizational environment. The researchers continually find that the frequency of interaction is positively related to school district performance; the greater the number of actors and interaction with whom the superintendents "networked," the higher the performance. However, in spite of these important findings, the weakness of large-n studies in general is the typically thin description of the measures of "network" and "management." While it has been argued that a simple count of contacts and interactions is an appropriate measure of actual management behavior (Meier and O'Toole 2005), there are still limitations to adding up dyadic contacts compared to viewing the network qua network as the primary unit of analysis (Agranoff and McGuire 2003).

So the preponderance of empirical research on public management networks has thus far either been small-n studies with strong measurement validity but perhaps lacking clear causal

relationships between actions and effectiveness, or large-n studies that establish strong internal validity but lack the thick description that comparative case analyses can provide. With a few notable exceptions, these studies have been cross-sectional. While there have been many important contributions from the best of this research, the public management field must find a way to bridge the use of complete and accurate conceptualizations of a network with the network's activities, and in turn with its outcomes. Many conceptual models of network origins, antecedents, activities, and outcomes exist in the literature to provide guidance (Bryson et al. 2006; Thomson and Perry 2006), but it is time to test these models empirically.

Conclusion

As our bigger questions suggest, network development and action constitutes the essence of our inquiry. Among the most important issues that remain with regard to network development concerns the process of converting a network-generated, multi-agency solution into policy “energy.” Too often, networks find reasonable solution approaches, but then run into political, financial, or legal barriers that prevent the next action step. Although not well understood, the policy barrier to network success is one of the most logical and most powerful. Networks can attempt to overcome provisions of established public policy simply by attempting to change them, but that can be a convoluted process. A few solutions have been suggested: incorporating representative policy-makers like state legislators into the network process, hoping for the efficacy of knowledge-based appeals, or lobbying on behalf of the network. In these very common situations, network-derived knowledge that is transformed into brokered consensus becomes, in effect, a step in the policy process, and one that may evolve over time. More must be known about how networks overcome policy barriers and about the steps between network

agreement and public policy action/change.

Another issue that relates to network development is how the process of converting knowledge to enhanced capacity facilitates the operations of networks. Somehow, networks convert their searches for technical, legal, fiscal, and political knowledge into solutions. However, networks often face deep uncertainty, particularly with regard to arriving at potential technical solutions. It would appear that some process occurs between understanding a knowledge gap (overcoming uncertainty) and action. Perhaps it transpires as network actors seek to maximize relevant knowledge, explore potential solutions on an interdisciplinary basis, engage in mutual learning, and deliberatively debate. These processes can lead to enhanced collective capability, which facilitates agreements, courses of action, and working solutions. This transformative process requires explanation.

It appears from some research that there can also be too much action or process in a network, which can lead to both suboptimal collaborative outcomes and collaborative inertia. We must learn how networks overcome such inertia. Climbing the “hurdles of process” is essential to achieving real results. Nevertheless, process can wear down collaborative efforts, and in some cases, also make it difficult to cope with the power of external forces such as key agencies or overcome policy barriers. Changes in governing structures and a reorganization, of sorts, may directly affect changes in process. The way that successful networks work around these collaborative obstacles becomes a key to network action.

A core concern related to a network’s ability to reach solutions and solve problems is the legitimacy capacity of the networks themselves. Networks that have no or circumscribed legal authority to act still somehow make an impact on the problems they address. Networks that only exchange information and/or enhance their partner’s capacities can make some contribution

toward problem solution, albeit indirectly or in the long run. Other networks that have some authority to act often do so indirectly or have extremely limited authority. Overcoming the seemingly formidable obstacles of no or limited authority requires a form of dedication and perseverance that needs to be understood.

As we have suggested, networks are “of the government” and work with non-governmental partners in multi-entity, multi-jurisdiction settings. Jurisdictional boundaries often do not conform to these settings, but jurisdiction still matters politically and otherwise. Each governmental entity is legally chartered, not as a voluntarily aggregated association, but as an entity of the state. As such, it has a constitution or a charter, and its agencies are rooted in legal code, and it has an area-wide constituency. While its agents can and are often partners in collaborative enterprises like networks, its participation is clothed in legal authority and normative power, particularly within its boundaries. As a result, network partners must work with and around these jurisdictional powers to achieve accommodation. These are critical but poorly understood network processes.

The bureaucratic agencies of the state that operate the tools of governance and participate in networks are being changed operationally at their core to accommodate collaborative activity. The public agency has changed to meet the challenge of networked activity. Government administrators and specialists are both of the state and of the network. They increasingly operate with agents and organizations external to the agency, which undoubtedly has changed what they do and, most important, has changed hierarchical authority or bureaucracy. The nature of these changes and how they impact network structure and process is key to understanding the role of the state and how it articulates with nongovernmental agencies.

We have raised many more questions than answers, which reflects both what we know

and what we need to know. Many questions remain to be answered. We have addressed the “bigger” ones and offered some preliminary suggestions about how to answer them, but we understand that much work needs to be done. As in many research fields, it seems that when one question is answered empirically, many others are raised; thus, our continued exploration of the big and even bigger questions. Ultimately, research in network management “must inform action” (Agranoff and McGuire 2001, 323) and this should be the guide for researchers investigating any management endeavor. To paraphrase Daft and Lewin (1993), courageous public managers are experimenting with network forms of organization, so courageous researchers should study these forms, defining the patterns, variables, and theories that will increase the understanding of readers in both academic and managerial worlds (vi). Public management scholars have begun to do just that and must continue to do so.

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