

PUBLIC ADMINISTRATION AND PUBLIC POLICY

Governance Networks in Public Administration and Public Policy

SECOND EDITION



**Christopher J. Koliba, Jack W. Meek,
Asim Zia, and Russell W. Mills**



“We live in challenging times where rapid advancements in governance theories and methods match with an acute understanding that many policies and politics are falling short of delivering the things society needs in order to improve. This book brings together ideas from different strands, such as social network analysis and systems theories, to present a coherent understanding of the complexity of governing today’s society. Highly recommended to scientists and practitioners who wish to stay on top of their game.”

Lasse Gerrits, *Otto-Friedrich University Bamberg, Germany*

“In articulating the values that underlie the search for democratic governance, and explaining the processes of communication, coordination, and coherence that generate networks as instruments of collective action, the authors make a lasting contribution to the field of public administration and policy. At a time when democratic values and principles have come under attack in the public discourse, this book is a clear explanation of governance as a complex, dynamic process and an affirmation of the capacity of citizens to create viable instruments of public policy and practice.”

Louise Comfort, *University of Pittsburgh, USA*

“A masterful and comprehensive overview of interorganizational governance and related approaches as complex adaptive systems and both stable and changing entities that are democratically anchored. This volume also approaches network administration as exchange/adjustment related steering and promotion and cooperative strategic and mutual adjustments based on knowledge development.”

Robert Agranoff, *Indiana University, USA*



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GOVERNANCE NETWORKS IN PUBLIC ADMINISTRATION AND PUBLIC POLICY

What do public administrators and policy analysts have in common? Their work is undertaken within networks formed when different organizations align to accomplish some kind of policy function. This second edition of *Governance Networks in Public Administration and Public Policy* offers a conceptual framework for describing governance networks and provides a theoretical and empirical foundation in their construction.

Based on research and real-life experience, the book highlights the interplay between public actors and policy tools, details the skills and functions of public administrators in the context of networked relationships, and identifies the reforms and trends in governing that led to governance networks. This practical and accessible text presents often complex concepts in such a way that readers can engage in the ideas, apply them, and deepen their understanding of the dynamics unfolding around them. New to this edition:

- A dedicated chapter on “complexity friendly” meso-level theories to examine core questions facing governance network analysis
- New applications drawn from the authors’ own work in watershed governance, transportation planning, food systems development, electric energy distribution, the regulation of energy, and response and recovery from natural disasters, as well as from unique computational modeling of governance networks

Further instructor and student support materials, including PowerPoint® presentations and writable case study templates, may be found on an accompanying eResource page. *Governance Networks in Public Administration and Public Policy* is an indispensable core text for graduate and postgraduate courses on governance and collaboration in schools of Public Administration/Management and Public Policy.

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GOVERNANCE NETWORKS IN PUBLIC ADMINISTRATION AND PUBLIC POLICY

SECOND EDITION

CHRISTOPHER J. KOLIBA,
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This book is dedicated in sweet remembrance of my grandmother, Patricia King, who encouraged me to follow the beat of a different drum, and to my family, Erica, Naomi, Orielle, and Jasper, who make it all worthwhile.

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work focuses on regulatory governance and executive-legislative interactions in the policy process. His work has appeared in a variety of publications including *Regulation & Governance*, *Journal of Public Policy, Administration & Society*, *Legislative Studies Quarterly*, *Journal of Cost-Benefit Analysis*, and *Public Administration Review*, where his 2007 article with Chris Koliba and Asim Zia was awarded the Marshall Dimock award for the best article.

Preface to the New Edition

Since the writing of the first edition of this book, the notion that the governance of societies is taking place across networks of public, private, and nonprofit actors has continued to gain traction, not only among public administration, public affairs, and public policy researchers, educators, and scholars, but as a matter of common understanding among those living and working within these networks. In addition, the idea that we must take a broadened view of governance as more than just a concern and sphere of activity for governments, but to a more complex terrain of nonprofit and private sectors has taken root. Although we make the case early in Chapter 1 that governance networks have been with us for a very long time, we do agree with those who view the process of governing through networks as a phenomenon that is increasing in scope. The ubiquity and complexity of contemporary governance makes it all the more difficult to describe and understand.

The need for a book like this has not dissipated. Nor has the body of literature regarding governance networks, their structures, and compositions dissipated. In preparing the second edition of the book, we have attempted to capture some of the more recent developments in the network governance literature. In an effort to align governance network analysis to some of the seminal policy and governance theories in the field, we have added a new chapter, Chapter 11, titled “Meso Level Theories for Governance Network Analysis.”

New books on governance networks have been published since we first published the first edition. These books are likely to be followed by more. As a result, a body of knowledge and empirical evidence about governance networks is growing. In this second edition, we try to capture some of the more recent contributions to governance network analysis. We recognize the likelihood of having missed some important advances and studies that have and will become important to describing and analyzing the governance network as a unit of analysis.

In addition to updating the literature and new advances in governance network analysis, we provide some summaries of published studies and models of governance networks that we, the authors, have authored and co-authored. The eight plus years since we first wrote this book have afforded us opportunities to employ parts of the framework presented here in empirically driven studies of governance networks. We present summaries of many of these studies in sections that we call “Applications” (or “Apps”) that are presented at the end of Chapters 3, 4, 6, 7, 8, 9, and 10, and offer the reader some examples of governance network analysis across many policy domains using a variety of research and modeling methods. These Applications sections will feature studies of governance networks in the areas of food system planning, water quality planning and management, emergency management, transportation project design and implementation, traffic congestion management, energy distribution, energy extraction, airline safety, anti-terrorism and security, harbor management, public education, and global climate change governance. Each summary includes an abstract, methods, major findings, and a few key figures and tables from each paper. The purpose of including these Applications is to provide illustrations of how pieces of the governance network framework can be employed to study different types of questions in different settings. The visualizations of multilevel governance that are found within many of these examples may be of particular service. A variety of ways of displaying governance configurations are to be found on these pages. We think that the plurality of methods and policy domains found in these examples bring home the key point that governance networks are a useful unit of analysis, and that we can build a broad and rich comparative body of knowledge on the subject.

At the time of writing the first edition, the world was just coming to grips with the “great recession.” We were glad to have provided some modest restraint about how this economic crisis would influence the future of network governance, taking note of the, then, bailouts of the American financial services and automobile industries, and suggesting that some “re-nationalization” of private assets would take place, particularly in the West. These bailouts were proven to be effective, but short lived.

The writing of the new edition is taking place during the heat of a special investigation into the actions of the sitting President of the United States, and members of his campaign and administrative teams. This investigation underscores the complexity and the vulnerability of highly networked systems to influence by the actions of a few, well positioned, individual agents. The present social media landscape is defined by information networks that are large, allowing for the broadcast of messages to narrowly tailored networks for the brokering of information and material resources (e.g., money), and for influencing the behaviors, values, and attitudes of others.

We make a stronger case in this new edition that one agent's position within a network has some bearing on the actions of other agents in the network. This dynamic occurs across all social scales. Individual people influence others within and across all of their social interactions—face-to-face or online. Groups and organizations, likewise, influence other groups and organizations and the individual people who populate them.

A second development since the first edition of the book is the advances that have been made to model governance networks. Since the publication of the original edition of this book, the field of network studies within public administration and public policy studies has continued to evolve. New methods of network analysis and network modeling continue to advance. Increases in computational power and software are now enabling researchers to build computer models and “serious” games to study governance dynamics. Game theory, experimental and behavioral economics, social psychology, and the decision and behavioral sciences have increasingly been used to conceptualize and test theories that may explain agent behavior. These developments are captured in an updated Chapter 12 on methods and illustrated in several Apps found at the end of Chapters 4 (App. D) and 7 (App. I).

Preface to the First Edition

Our hope in writing this book, this way, is that readers engage in these ideas, apply them to the governance networks in their midst, and deepen their understanding of the dynamics unfolding around them. We wish to address the practical applications of the conceptual framework for public administrators, policy analysts, policy makers, students, and researchers. To a certain extent, then, we hope that this book is both accessible and practical, a tall order for a topic as complex as governance networks.

Much of the context for this book is premised on the description of governance networks and political and administrative trends founded within the United States. We deeply acknowledge that the development of policy and governance network frameworks, theories, and models has been led by researchers drawing on examples from many different national and international contexts. We particularly need to acknowledge the leadership of scholars from the United Kingdom, Denmark, Belgium, the Netherlands, and others who have made and continue to contribute to the evolution of these concepts and constructs.

The academic courses in which these concepts have been discussed have included Foundations of Public Administration, Administrative Theory and Practice, Policy Systems, a Collaborative Management Institute, and Systems Analysis and Strategic Management, taught at the University of Vermont and several research seminars at the University of La Verne as part of the Regional Studies Project. A special thanks goes to the numerous graduate students at the University of Vermont including: Renea Bordeau, Marcia Bristow, David Curtis, Haley Dienst, Nicole DuBois, Jennifer Kenyan, Chong Kim, Emilie Kornheiser, Leslie Langevin, Santina Leporati, Patty McShane, Alissa Robertson, Catherine Symans, Marc Bilodeau, Meghan Butler, Katherine Gleeson, Kelly Houston, Mercy Hyde, Tracey McCowen, Micheal Loner, Kristen Wright, Erica Spiegel, Kevin Stapleton, Robin Kemkes, Forest Cohen, Emily Bibby, and Carol Beatty.

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The true worth of the book will be determined by those who view the framework as useful to understanding governance networks and defensible in the face of empirical scrutiny. As we note in Chapter 13, we believe these are critical next steps to advancing our understanding of governance networks. We look forward to learning more about the nature of governance networks and how we can improve our understanding of their dynamic nature.



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Introduction: Why Governance Networks?

All men [*sic*] are caught in an inescapable network of mutuality, tied in a single garment of destiny.

—Martin Luther King, Jr.¹

Some problems are so complex that you have to be . . . well informed just to be undecided about them.

—Laurence J. Peter²

Consider the instance of the local town manager who is faced with the challenge of rectifying a several-decades'-old dispute over who is responsible for a town road that gets washed out after every significant rainfall. The owners of the hillside land adjacent to the road claim that the agricultural practices of the farm farther up the hill are the cause of poor runoff, and therefore the farmer should be responsible for ameliorating the problem. The farmer up the hill claims that the roadway culverts were not constructed right. The state's agency of natural resources is interested in the site because of the extensive pollution that this situation is causing to the nearby wetland down the hill. The town manager is caught between a host of public and private actors with interests defined by the narrowness and expansiveness of their concerns (Houston, 2009).

Take, as another instance, the city administrator faced with an even greater problem: the toxic water table that sits under the city's business district. Faced with challenges from the Environmental Protection Agency (EPA) to declare the district a Superfund site, this manager must work with the city's elected representatives, the private businesses in the area, and the main polluters to work out a compromise that will clear up the aquifer while preserving the economic vitality of the downtown business district (Rosegrant, 1996).

Moving up in magnitude, consider the challenges that a Federal Emergency Management Agency (FEMA) administrator faces when asked to coordinate the processing of "requests for assistance" during the response and recovery phases

following the landfall of Hurricane Katrina in August 2005 (Government Accountability Office, 2006). As the coordinator with the bureaucratic authority to manage the system, she is asked to coordinate the fulfillment of requests for assistance with a regional unit of the Red Cross, an entity that she has no jurisdictional power over. Or consider the long-term Red Cross volunteer who has been assigned to work with FEMA to make sure that the affected area's needs are met. How should relationships between FEMA and the Red Cross be designed? What would happen if there is no time to sort out the details?

Moving up to an even higher level of magnitude, consider the roll out of a new federal level health care exchange online. As your team sets out to work with dozens of IT contractors in the construction of the website, you, as President of the United States, warn of the perils of failed technology. You delegate responsibility and are troubled to find the roll out of the website is considered a major failure because of glitches to the website. The army of private IT contractors did not deliver what was promised, but you are held to blame!

Or consider the contract manager for the U.S. Department of Defense who has documented the repeated failures of a contractor to effectively deliver the supplies and services specified within the contract, but who has no authority to ensure that the contractor complies; or the leader of a small nonprofit organization who is considering what role his or her organization should play within an emergent coalition of advocacy groups and service providers; or the regional planner who needs to work with a variety of state agencies, regional and local governments, developers, and area businesses to design regional land use, transportation, and economic development plans; or the financial securities regulator who observes the mounting risks arising out of an unregulated mortgage products industry.

Also consider the policy analyst who is asked to recommend an implementation strategy for a new public health care insurance option, or the policy analyst who is asked to determine which social service partnerships are providing adequate care to his or her clientele and why, or the policy analyst looking for ways to frame a problem in such a way as to build support for a given policy tool.

What do all of these public administrators, policy makers, and policy analysts have in common? *Their work is undertaken within networks formed when different organizations align to carry out and accomplish some kind of policy function.* To be effective, they must find ways to navigate complexity in such a way as to generate effective results.

In this book, we describe a variety of trends and movements that have contributed to the complexity of these systems, as well as the challenges that public administrators, policy makers, and policy analysts face as a result. Globalization has inextricably linked nations, institutions, organizations, and individuals. The public interest gets molded and shaped by coalitions of interest groups using the next advances in information technology and marketing strategies to influence

governance systems toward their desired ends. The increasing complexity and “wickedness” of public problems, the expansion of information technologies, the moves to contract out, privatize, and partner, coupled with globalization, have fueled interest in the application of network frameworks to the study of public administration, public policy, and governance structures. These trends have contributed to the emergence of governance structures that have become, essentially, innovations in governing. There is growing evidence to suggest that these trends have and will continue to shape interjurisdictional landscapes, and represent new kinds of reform with regard to how government interacts with for-profit and not-for-profit organizations to design and deliver public goods and services. We describe these arrangements as *governance networks*, defined here as interorganizational networks comprised of multiple actors, often spanning sectors and scale, working together to influence the creation, implementation, and monitoring of public policies.

We write this book at a time when we are just beginning to understand how the performance of governance networks is measured and the long-term efficacy of public-private partnerships, contracting out, and other collaborative arrangements as they have grown more common. We assert that governance networks are *not*, unto themselves, a social good. Ineffective and nondemocratic networks exist. We believe that a turn toward networks (not at the exclusion of hierarchies and markets, but in relation to) in public administration and policy studies is useful in ultimately determining questions of the normative worth (e.g., questions of ethics, norms, and values) of networks and the proper role of public administrators in upholding these values.

Traditional views of management and administration that rely on the study of hierarchical arrangements are not sufficient enough to explain the changing conditions that public managers find themselves working within. Shifting the delivery of public goods and services entirely to “the market” is not sufficient enough either, as we will argue that business management principles and practices lack the capacity to ensure democratic accountabilities.

Because what accounts for success and performance in governance networks is still just emerging, we will offer very few prescriptive judgments or definitive “how to’s” in this book. We avoid rendering generalizations about how governance networks *should* be structured and managed, although we invite the readers to do so themselves by applying the tools and frameworks introduced here to the study of the governance networks within their midst, and to follow the growing volumes of literature focused on posing evaluative questions. Some examples of this type of work can be found in the “Applications” sections of the book at the end of many chapters, a new feature of the second edition.

We place an emphasis on the imperative to develop greater “situational awareness” of how governance networks operate. Pilots, engineers, emergency management professionals, and military strategists have emphasized the

importance that situational awareness brings to understanding complex systems. Situational awareness hinges on a combination of systems thinking, the acquisition and filtering of information, and the application of descriptive patterning that may only be developed through extensive experience built up over time.

Over the course of the book, we describe a framework that network administrators, policy makers, and policy analysts can use to develop enough situational awareness to carry out their work efficiently, effectively, and democratically. We present a taxonomy of network characteristics that has been derived as a result of blending the network literature found within the policy studies and public administration fields with interdisciplinary theories and frameworks such as social network analysis, systems theory, and complexity theory. To further clarify the emphasis being placed on taxonomy, we draw on Nobel Prize winner Elinor Ostrom's (2007) distinctions between frameworks, theories, and models:

1. A *conceptual framework* identifies a set of variables and the relationships among them that presumably account for the asset of phenomena. The framework can provide anything from a modest set of variables to something as extensive as a paradigm.
2. A *theory* provides a denser and more logically coherent set of relationships. It applies values to some of the variables and usually specifies how relationships may vary depending upon the values of critical variables.
3. A *model* is a representative of a specific situation. It is usually much narrower in scope, and more precise in its assumptions, than the underlying theory. Ideally, it is mathematical (as paraphrased by Sabatier and Weible, 2007, p. 6).

In this book we provide readers with a *conceptual framework* of governance networks to help understand and manage governance networks. It is our hope that the framework is relevant to as broad a range of situations as readers are likely to experience. In building a framework through which we may describe governance networks, we rely heavily on network science, network metaphors, and network theories, and combine them, where appropriate, with some of the central tenets of systems and complexity sciences and theories. We also draw on theoretical frameworks found in policy studies, public administration, and governance studies. By doing so, we try to contribute to the development of the systematic and transdisciplinary study of governance networks.

Overview of the Book

This book was written with several audiences in mind: network administrators, policy analysts, policy makers, and students of public administration and public

policy. For policy makers, policy analysts, and network managers, this book provides a framework for thinking about the relationship between policy actors, the nature of the ties between them, and the overarching structures and functions that determine how and to what extent a governance network adds public value, meets the public's interests, performs, and succeeds. Students of public administration and public policy may be interested in learning how governance networks work and how best to study, survive, or thrive within them. They may apply the framework or some of the language from this book to study particular cases or for larger studies.

In Chapter 1, our review of the literature on governance networks leads us to suggest that networks have always been an integral feature of democratic governments and intersector arrangements; however, contemporary trends have accentuated the importance that governance networks play in modern democracies. These trends include the emergence of “wicked problems,” the move to privatize government services, the move of government to partner with sector stakeholders to provide public goods at reduced costs, and the more recent turn to regulate and nationalize. Recognizing that while governance networks have been with us since the beginning of the American democratic experience, it is clear that the range and depth of innovations in governance networks place them in a different stage of development, which raises serious questions that deserve our attention. While there are positive benefits to governance networks, there are also significant challenges, particularly with regard to how governance networks are to be administered, the nature of “democratic anchorage” of these networks, and constructing ways in which governance network performance can be understood.

In Chapter 2, we offer a conceptual framework to assess governance networks that conceives of networks as a kind of participant relationship that is evident in all forms of macro relations: markets, hierarchies, and collaboratives. With this analytic frame, we assert that “mixed-form governance networks” account for markets and hierarchies as network forms alongside “collaboratives” or partnerships. In this perspective, it is evident that mixed forms of governance networks operate across multiple sectors and in multiple geographic scales where mixed administrative authorities consist of vertical and horizontal, relational ties. To get to this perspective, we develop an understanding as to the ways in which network metaphors and analytical frameworks have been employed within the public administration, policy studies, and governance fields, and highlight discrepancies across the literature and their concerns in regard to the relationship between network structures, and markets and hierarchies.

Central to our work presented here is the belief we hold that the presentation of a conceptual framework of mixed-form governance networks allows us to develop a means for creating a taxonomy of governance network characteristics, and ultimately describe the many different ways that stable governance networks

arise and carry out one or more functions related to the policy stream. The next task is to develop a set of network characteristics as a matter of developing multiple layers of analysis—from the characteristics of individual network actors, to the nature of the ties between actors, to the nature of network-wide characteristics, to, ultimately, systems-wide characteristics that position governance networks within broader external environments.

In Chapter 3, the focus is placed on the network actor: the most basic component of governance networks. We refer to network actors as nodes that represent social actors with various unique goals and roles within the network shaped by the sector they represent (public, private, or nonprofit). These nodes are to be understood to have a definitive geographic scale (local, regional, province/state, national, or international) as well as a social scale (the nesting of individuals, groups, organizations, and networks of organizations) that shape their interests and role in the network. Nodes are also influenced by their place in the network (center and periphery) and the types of capital resources they possess. The characteristics of each node noted above uniquely shape nodal behavior and influence the nature of network patterns and the roles played in the emergent social exchange of resources.

Chapter 4 focuses on the ties among and between nodes in the network. The central feature of nodal ties is resource exchange. From social network analysis, we assert that the relation among nodes shapes the kinds of administrative authorities among the nodes, and that the nature of resource exchange is shaped by the formality, strength, and coordination of nodal ties. We refer to these as the vector of ties, or the ties among administrative authorities. Both the social ties (strength and coupling) shaped by nodal context characteristics (outlined in Chapter 3) and the vector of administrative ties shape the governance network and determine resource exchange. This “multiplex” of ties can assist in assessing network stability.

In Chapter 5, interorganizational governance network configurations and operations are described and placed within policy streams. Emphasis in this chapter is placed on the nested nature of three network-wide functions that are performed by governance networks: operating functions (coordination, mobilization, information sharing, capacity building, learning), policy stream functions (defining and framing problems, policy planning, policy coordination and implementation, policy evaluation, policy alignment), and policy domain functions that are issue or domain specific.

Chapter 6 reviews six kinds of network-wide structures: intergovernmental, intragovernmental, interest group coalitions, regulatory subsystems, grant and contract agreements, and public-private partnerships. These arrangements are linked to use of “policy tools” in the work of Lester Salamon (2002b). From a systems perspective, governance networks are viewed in terms of functions needed within the system and the structures designed to achieve these functions.

In Chapter 7, we shift again the level of discourse on governance networks and examine them within the perspective of system dynamics. Relying on certain elements of complex systems theory, we offer a way to conceive of governance networks as a series of inputs, processes, outputs, and outcomes with positive and negative feedback that contribute to understanding the nature of regulation and governance of governance networks. The imagery we attempt to offer allows for the reader to consider the dimensions of governance networks as working patterns of a holistic, dynamic system. We believe the systems perspective provides one avenue to examine the role and function of governance networks shaped by the interplay of the parts of the system and how these contribute or detract from system-wide goals. We believe that this perspective will contribute to discussions later in the book with regard to critical considerations regarding governance networks, namely, administrative, accountability, and performance considerations. This chapter sets the stage in providing perspective to address the central challenges concomitant with the emergent character of mixed-form governance networks.

In Chapter 8, we argue that mixed-form governance networks reflect selective administrative characteristics of four paradigms of public administration: classical, new public management, collaborative public management, and governance network management. From this integration, the chapter directs its attention to the roles that individual public administrators take within governance networks. Clearly, public managers play a critical role participating in and administering governance networks, particularly ensuring democratic anchorage and network performance. These are difficult challenges given the complexity of administering across boundaries. Our review of the literature in this chapter suggests a number of promising administrative skills and management strategies in active and performing governance networks. We highlight the avenue available for the public administrator to enhance participatory governance. Most important, we assert that the role of the public administrator in governance networks should be viewed as evolutionary and emergent, as one of continuous adjustment, calling upon skills that assert both adaptive and directive qualities. Such is the demand on the public administrator managing in interdependent contexts.

With Chapter 9, we turn to the challenge of governance network accountability. From a systems perspective, we view accountability as representative of the structures that participate within the governance network and guided by the nature of the interdependencies of network participants and their sector characteristics. This view of accountability is very different from ones traditionally conceived between two participants bound within a hierarchy and reflects a more interdependent and complex character of governance networks. Simply put: network accountability is a system-level construct—one that is shaped by the accountability structures of the individual parts of the network. As such, the accountability structures examined in this chapter are constructed around

accountability regimes that represent the participants and the operations of the network.

With Chapter 10, we explore network performance. Performance measurement is often viewed as the systematic application of information to assess successes and failures. To assess network governance performance, we again turn to a system frame of reference and discuss the kinds of challenges that are operable within interorganizational governance networks. The administrative challenge here is developing appropriate information that enhances participation and improves the functioning of feedback loops. Clearly, performance measurement is challenging within organizations, and when we move our attention to governance networks, these challenges are accentuated.

With the basic foundations of governance network structures, functions, accountability, and performance in place, in Chapter 11 we explore the relationship of governance network analysis to a number of existing, meso-level, “complexity friendly” theoretical frameworks that are complementary to, and perhaps capable of being synthesized with, the governance network as a unit of analysis. Several “meso” level theories are explored, including Multiple Policy Streams theory, the notion of Punctuated Equilibrium, the Institutional Analysis and Development (IAD) framework, the Advocacy Coalition Framework (ACF), the Salience and Complexity Model, several more recent contributions of complexity and network management theories, and the Collective Impact framework.

Chapter 12 highlights some of the new and existing empirical and simulation approaches to describing, evaluating, and modeling governance networks. These are discussed, as well as the role of governance network analysis in formal education and training opportunities.

We conclude in Chapter 13 by returning to the need to understand and support the normative basis through which governance networks obtain their democratic legitimacy. We discuss the relationship between public values, public interests, and governance networks and assert that governance network analysis needs to be rooted in theories of democracy.

Notes

1 (1986, p. 290).

2 (n.d.).

Chapter 1

The Emergence of Governance Networks: Historical Context, Contemporary Trends, and Considerations

Inter-organizational, inter-governmental, and inter-sectoral coordination, of course, has always been important in American administration.

—Donald Kettl¹

In this opening chapter we make two arguments: (1) that governance networks have always been an integral feature of democratic governments, and (2) that several contemporary trends have accentuated the importance that governance networks play in modern democracies. Recognizing what is at stake here, we lay out several areas of consideration around which we organize the book.

We anchor our first argument around a thought experiment first introduced by Thomas Paine in his classic pamphlet *Common Sense*. We use this thought experiment to argue that modern democratic governments are dependent on the evolution of informal social networks into more formalized and complex network structures. We argue that the separation of powers embodied in the U.S. Constitution (and borrowed from the trilateral form of government first developed in Great Britain) can be interpreted in terms of basic network structures. We also recognize how the early discussions about states' rights and

the federalist system ultimately structured the networked features of intergovernmental relations that we find in the United States today. Drawing again on Paine's thought experiment, we briefly trace the history of intersector relations that emerged out of colonists' concerns about the roles of religious organizations and trading companies. We conclude this section by recognizing that a "politics of structure" (Wise, 1994) has always marked the relationships between governments, corporations, and nonprofit organizations.

We then turn to some of the contemporary trends that are influencing the development of more recent innovations in governance. We chart how the moves to devolve, privatize, regulate and partner are contributing to the evolution of governance network structures. We lay the foundation for considering how these trends help shape who participates in governance networks, what roles and authorities they wield, and what functions they take on.

We presume that governance networks operate within democratic systems. We discuss the extent to which the network turn that we describe here is leading to the undermining of state sovereignty or may be serving to form the basis of new forms of "democratic anchorage." We conclude the chapter with an overview of the major themes that will guide the remainder of the book.

Networks as an Inherent Property of the U.S. Government

During the late 1700s, in what came to be the eastern seaboard of the United States, some critical debates were being had about the proper roles and configurations of government. Those debates concerned power, who had it, and how was it to be exercised. These debates were not occurring simply as a rhetorical exercise of fancy, but to inform the construction of new institutions and social structures. The weighing of these ideas led to active experimentations that, some argue, are still going on today. We argue that questions of network governance were at the heart of these deliberations.

In 1776, Thomas Paine authored the most widely read pamphlet of his era, *Common Sense*. In laying out an argument for the overthrow of the British monarchy, Paine provided his readers with a thought experiment designed to surface what he believed to be the place of government in the lives of free citizens. The thought experiment begins with a vision of a small band of settlers arriving in a pristine natural environment, with no signs of an existing human civilization. He asks the readers to think about what life would be like if there were no governments:

A thousand motives will excite them thereto; the strength of one man is so unequal to his wants and his mind so unfitted for perpetual solitude that he is soon obliged to seek assistance and relief of another, who in

his turn requires the same. Four or five united would be able to raise a tolerable dwelling in the midst of a wilderness, but no man might labor out the common period of life without accomplishing anything; when he had felled timber, he could not remove it, nor erect it after it was removed; hunger would urge him from his work and every different want call him a different way. . . .

Thus necessity, like a gravitating power, would soon form our newly arrived emigrants into society, the reciprocal blessings of which would supersede and render the obligations of law and government unnecessary while they remained perfectly just to each other; but as nothing but Heaven is impregnable to vice, it will unavoidably happen that . . . they will begin to relax in their duty and attachment to each other, and this remissness will point out the necessity of establishing some form of government to supply the defect of moral virtue.

Some convenient tree will afford them a statehouse, under the branches of which the whole colony may assemble to deliberate on public matters. It is more than probable that their first laws will have the title only of regulations, and be enforced by no other penalty than public disesteem. In this first parliament every man by natural right will have a seat.

But as the colony increases, the public concerns will increase likewise, and the distance at which members may be separated will render it too inconvenient for all of them to meet on every occasion as at first. . . . This will point out the convenience of their consenting to leave the legislative part to be managed by a select number chosen from the whole body, who are supposed to have the same concerns at stake which those who appointed them and who will act in the same manner as the whole body would act were they present. . . . And as [these representatives engage in] frequent interchange will establish a common interest with every part of the community, they will mutually and naturally support each other, and on this . . . depends the strength of government and the happiness of the governed.

(Paine, as quoted in Adkins, 1953, pp. 5–6)

At first, Paine claims, this small band of settlers would have to fend for themselves, relying on each other to build homes and common infrastructures, hunt and forage for food, and eventually, cultivate the land. As the population grows, the informal ties that bind this small group are not enough to meet the needs of community. Certain members of the community may begin to specialize based on their particular skill sets and interests. This community soon has its share of carpenters, blacksmiths, farmers, etc. At its smaller scales, conflicts may be worked out between community members. However, at some critical point

the complexity of living and working together gets to be too much to handle through informal means. Paine asks the reader, rhetorically, what would this community do? He describes what happens next. Community members would convene under “some convenient tree” to determine the rules of the community and, ultimately, how these rules are to be set and enforced. A fledgling government would be born out of what had been previously an informal network of settlers. Paine essentially argues that governments exist because communities of human beings reach a certain size, at which point their informal networks need to be formalized, leading to the establishment of government institutions. Revisiting Paine’s thought experiment reminds us that our first governments emerged out of informal social networks.

Paine made the argument that monarchies were not a suitable form of government because they place control of society out of the hands of ordinary citizens. The founders recognized that displacing kings and queens as sovereign rulers did not do away with a more rudimentary consideration, namely, who had the power to decide and act on behalf of the public? The later feudal systems of Europe were arranged as hierarchies, with the monarch at the top. Power flowed from the top down. Rejecting monarchies, the founders understood that power needed to flow through some new form of institutional structure. They placed a great deal of faith in the capacity of institutional structures to mitigate wanton exercise of power. Steeped in assumptions regarding the self-interested nature of human behavior, these founders sought to devise a structure of government designed to defuse the concentration of power from the hands of the few to the institutional structures of the many. Although they did not explicitly use the term, the founders essentially turned to network structures for a solution.

The founders sought to devise a structure of government designed to defuse the concentration of power from the hands of the few to the institutional structures of the many.

The framers of the U.S. Constitution had a problem to solve. They were chiefly concerned about the concentration of power into the hands of a monarch, and wary of humans’ proclivity to act selfishly and concentrate power around them. Noted political scientist and historian of colonial political thought, Ralph Ketcham concludes that, “By 1787, not only had the theory of self-government been widely debated, but virtually every conceivable device for implementing it had been suggested, if not tried” (Ketcham, 1986, p. 3). The framers’ ultimate solution was to devise a network of three separate institutions of authority (what network researchers refers to as “nodes”) that we now describe in terms of

legislative, judicial, and executive branches. Each branch would have its own combinations of checks and balances in relation to the other branches.

These checks and balances may be explained in terms of one branch having authority *over* the others, as well as all branches sharing authorities *with* each other. Thus, the *separation of powers* flows through relational, networked ties that may be vertically, horizontally, or diagonally articulated (Figure 1.1).

In essence, the founders intuitively understood one of the major contributions that separate, distinct, yet interdependent networks of institutions bring to the study and design of systems of governance, namely, that relational power may be conveyed through both vertical (hierarchical) and horizontal (collaborative) ties. Because each branch of government has its share of checks and balances vis-à-vis the others, they are encouraged to find ways to build strong horizontal ties between them and, when substantive disagreements persist, wield vertical authority to keep the other branches in check.

In Table 1.1 we adapt Thomas Birkland's matrix, in which he describes the separation of powers, identifying instances when the legislative, executive, or judicial branch of government exerts authority over the other branches. We have added descriptors for instances of when one branch has authority over the others (see the first row) and instances of when one branch defers authority to one of the others (see the first column). As an example, the executive branch may wield principal authorities over the legislative branch when laws are recommended or vetoed, and make regulations that have the force of law, and in so doing, exert a certain measure of power and authority over the legislative branch.

Donald Kettl observes that "the Constitution—in its drafting, its structure, and its early function—was a remarkable balancing act of complex issues, political cross-pressures, and boundary-defined responses. . . . For generations since, flexible, bend-without-breaking boundaries have been the foundation of American government" (2006, p. 11). To this end, the network configuration of government conceived by the framers of the U.S. Constitution allows for frequent "border crossings" between branches and levels of government as well as between agencies

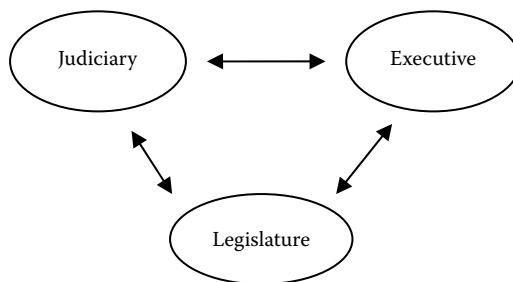


Figure 1.1 Separation of Powers.

Table 1.1 Authority Distributed across the Separation of Powers

		<i>Principal Authority Over</i>		
		<i>Legislature</i>	<i>Executive</i>	<i>Judiciary</i>
<i>Agent Authority To</i>	Legislature	Make laws	Recommend laws; veto laws; make regulations that have the force of law	Review laws to determine legislative intent; new interpretations = law making
	Executive	Override vetoes; legislative vetoes of regulation; impeach president	Enforce and implement laws	Review executive acts; restrain executive actions
	Judiciary	Impeach judges; call witnesses in hearings	Pardon criminals; nominate judges	Interpret laws

Source: Adapted from Birkland, *An Introduction to the Policy Process: Theories, Concepts, and Models of Public Policy Making*, M. E. Sharpe, New York, 2001, p. 47.

and units within a particular branch. Because governments are network structures in their own right, we must be careful not to assume that government interests are represented by one unified actor.

The public administrators responsible for operating within and across these network arrangements have always been confronted with challenges associated with the jurisdictional boundaries existing across levels of government. These challenges have most often been understood within the context of federalism, a topic that we turn to next.

Federalism

In addition to Paine’s indirect assertion that governments emerge out of informal network ties, and the founders’ reliance on network structures to devise a separation of powers, we find networks implicated in the decisions leading to the

formulation of the relationship between federal and state governments, a debate codified in the federalist-antifederalist exchanges of 1787. The central concern in these debates centered on the relationship between a national government and its states. The antifederalists sought to codify the Articles of Confederation, which imbued the states with greater autonomy vis-à-vis the federal government. The federalists won this debate. The arguments of Alexander Hamilton regarding the need for a strong central government to ensure economic prosperity, coupled with James Madison's concerns about human nature and the need for a strong central government of checks and balances, compelled the framers of the Constitution to devise a strong federal government. However, this federal governance structure still made room for the existence of substantive state power. The federal government was not to rule over the states with an iron fist. That the U.S. Civil War, which has been described as the "war between the states," occurred brings this point home. Although the Civil War did not result in the dissolution of the United States, it provides us with an important reminder of what can happen when networks fracture to the point of breaking.

The constitutional structure that was eventually enacted positioned the federal government as having vertical authority over state and local governments in some policy arenas, shared authority in other areas, and no authority over states and localities in still other areas. The Tenth Amendment reserve powers clause provides that "the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." Phillip Cooper observes that, "over time that provision has been read to mean that the power to regulate in matters of health, safety, and public welfare, commonly referred to as the police powers, are reserved to the states. Indeed, the Supreme Court has been increasingly willing in recent years to support that state authority and limit federal power. For this reason the federal government has had to rely on a system of intergovernmental grants and contracts to make important policies in these fields" (2003, p. 22).

THE 89,000 GOVERNMENTS OF THE UNITED STATES

- 1 national government
- 50 state governments
- 3,000+ county governments
- 12,000+ school districts
- 35,000+ municipal governments
- 45,000+ special districts

Source: U.S. Census Bureau 2012 Census of Governments.

**U.S. PUBLIC SECTOR
WORKFORCE COMPOSITION
(AS OF MARCH 2014)**

15% federal (2,475,780)

22% state (3,751,771)

63% local (10,574,332)

Total Public Sector Employment 16,801,883

Source: U.S. Census Bureau 2014 Annual Survey of
Public Employment and Payroll.

The relationship between American states and their local governments is also implicated in this history, having been described as “the nation’s oldest intergovernmental relationship (Walker, 1995, p. 267)” (Krane, Ebdon, and Bartle, 2004, p. 514). This history has been marked by the 1868 Supreme Court ruling in the *Clinton v. Cedar Rapids and Missouri River Railroad* case, eventually known as Dillon’s rule. This ruling essentially made local governments agents of state legislatures (Miller, 2002, p. 30), requiring any changes to local government charters to be voted on by state legislative bodies. Although some states have moved away from relying on Dillon’s rule, thirty-nine states currently rely on this structure to dictate state-local government relations (Richardson, Gough, and Puentes, 2003). The relative autonomy of local governments, vis-à-vis their state principals, has a bearing on the extent to which pushes for greater decentralization are possible (Richardson, Gough, and Puentes, 2003), a point we return to later in the book.

The distinctions between local, state, and national jurisdictions have been well captured in the voluminous literature pertaining to intergovernmental relations (IGR). Individual public administrators are often challenged by the need to seek clarification regarding the rules and roles governing intergovernmental relations. The crossing of intergovernmental boundaries gets mediated through legal interpretations of the U.S. Constitution and the legal and political precedence used to determine the distinction between national, state, regional, and local levels of government. Governance network administrators, particularly those immersed within intergovernmental networks, need to understand these legal, administrative, and political dynamics.

Networks as an Inherent Property of Intersector Relations in the United States

Governments at every geographic level are connected within networks of private and nonprofit organizations, resulting in a complex array of intersector ties. In this section we provide a tertiary look at the history of these ties within the U.S. context, framing this history in terms of the “politics of structure” (Wise, 1994) that have marked it. We will explore how these ties may persist as one sector’s attempt to influence the structures and behaviors of other sectors, or as collective attempts to engage in collective action and resource exchanges through governance networks. In this section we discuss intersector relations by focusing broadly on generalizations made about the relationship between governments and corporations, and government and nonprofit organizations. These generalizations will be built upon in later chapters.

As a sovereign authority, governments have the moral and legal authority to regulate businesses and industries, a fact first asserted when states in the United States established the rights to issue corporate charters. Governments wield authority over the private and nonprofit sectors through the establishment and enforcement of social, economic, and environmental regulations. Governments also contract with businesses to provide goods and services to meet public priorities and needs.

In the United States, governments have always regulated the operations of nonprofit organizations through charters that are registered at the state level. Legally recognized nonprofit organizations are required to have governing boards and comply with a set of economic and social standards to ensure nonprofit and, at times, tax-exempt status. Governments issue grants and contracts to nonprofit organizations for the delivery of public goods and services.

Intersector ties are bidirectional. Historically, corporations and nonprofit organizations have exerted influence over the structures and functions of governments. Corporations can influence public policies through campaign donations, lobbying, and their active involvement in public relations campaigns. As voluntary associations, nonprofit organizations serve as a conduit through which interests may be organized to undertake collective action. Nonprofit organizations also monitor the activities of governments.

The fledgling government of Paine’s thought experiment would be founded to run the affairs of the local community and likely coexist alongside of local churches, budding artisan guilds, and the establishments of area merchants. Because governments require resources to run, these nongovernmental institutions might be hired to provide services or goods used by the government in the course of carrying out its duties (early forms of contract agreements). These social institutions would also likely exert some measure of influence over who serves in the government and how the government’s affairs are carried out. This was

certainly the case in early Puritan settlements of New England, as churches and church leaders played key roles in government. The influence of private sector organizations in governmental affairs is evident in the early settlements around Jamestown and elsewhere in the mid- and lower Atlantic areas. Charles Wise has noted how the history of intersector relations may be marked by “the politics of structure” (Wise, 1994, p. 85), which extend across the intersector ties between governments and nonprofits, and governments and corporations.

Government-Nonprofit Relations

The early influences of religion in the New England settlements on the structures and functions of early colonial America led the framers of the U.S. Constitution to put in checks and balances to check the power that religion, religious institutions, and religious leaders could have upon government. The role of religion in the shaping of early American governments was considered by the framers of the U.S. Constitution and incorporated into the First Amendment, which called for the separation of church and state. In essence, they created a constitutional distinction between governments and religious institutions, leading to what we now understand as the differences between the public and voluntary sectors.

In the 1800s, religious institutions increasingly served as charitable organizations that performed important social services that would later be taken on by governments. Early social service organizations operating outside of the scope of formal government laid the foundation for the modern welfare state. With the growth in the size and number of nonprofits, an argument can be made that trends toward privatization and partnership have renewed a nineteenth-century dynamic, whereby governments are using indirect polity tools to enable nonprofit service delivery (Block, 2001). Today, in the United States, there are approximately 1.41 million registered nonprofits (McKeever, 2015).

The nonprofit sector (often referred to in the literature as the third, voluntary, or independent sector) contributed \$905.9 billion to the U.S. economy in 2013 and employed 11.4 million people. Additionally, 5.1 full-time equivalent volunteers in the nonprofit sector volunteered over 8.7 billion hours, representing value of \$179.2 billion in 2014 (McKeever, 2015). Nonprofits make up approximately 6% of the total number of organizations in the United States while its outputs represent 5.4% of total Gross Domestic Product (GDP). Finally, while average annual employment shrank by 0.6% between 2000 and 2010, nonprofit employment grew by 2.1% over the same timeframe (Salamon, Sokolowski, and Geller, 2012). In Chapter 3 we note the roles that the nonprofit sector plays in providing the social and physical spaces for citizens to associate with one another outside of the context of the state and private spheres.

The nonprofit sector has “traditionally served as a voice for articulating public needs and preferences” (De Vita, 1998, p. 229). The importance of voluntary

associations to the cultivation of democratic culture was first recognized by Alexis de Tocqueville in 1831. More recently, the value of voluntary associations to the health and vibrancy of “civil society” and social capital has been the subject of extensive study and consideration (Putnam, 2000). Voluntary organizations have been described in terms of their capacities to represent interests (Crenson and Ginsberg, 2002), an important factor when considering the “democratic anchorage” of the governance network.

The structures of nonprofit organizations have been mediated through governmental rules and regulations, such as charter requirements and a federal tax classification structure that places limits on the kinds of political influence that tax-exempt nonprofit organizations are able to wield. The U.S. Constitution contributes to the creation of interest group development by providing guarantees of free speech, association, and the right to petition the government for redress of grievances (Loomis and Cigler, 2002, p. 6).

Sector differences have been distinguished through constitutional law for reasons that have a significant bearing on how we come to understand governance networks. The separation of church and state and the evolving nature of corporate identity may be understood in terms of how power is structured within governance networks. The framers of the Constitution and, over time, the Supreme Court have had to consider how the public, private, and nonprofit sectors relate to each other. The U.S. First Amendment right to free speech has been extended to corporations and interest groups. Arguably, interest groups have always had access to the levers of government, attempting to exert their influences through informal social ties between lobbyists and elected officials, as well as through the formation of interest group coalitions. “Historically, nonprofits pioneered public programs that became government responsibilities when the demand grew beyond nonprofits’ capacity to respond. These programs include primary education, kindergarten, disease control, and many more. People also created non-profits because the existing business or government services were not considered sufficient because they were inaccessible, costly, barebones, culturally or religiously inappropriate, ineffective, or not innovative” (Boris, 1999, p. 22).

Interest groups (sometimes referred to as factions, organized interests, pressure groups, and special interests) serve as “a natural phenomenon in a democratic regime” (Loomis and Cigler, 2002, p. 3). Interest groups are formed to influence the structures, decisions, and actions of governments. Some types of interest groups, particularly lobbyists (and to an increasing extent, politically active think tanks), may become

intensely focused and well informed on the issues of structuring government agencies that affect their interests. . . . [They] are in a

position to pressure Congresspeople who have strong incentives to do what such groups want. Bureaucratic structure emerges from the battle of interests with features determined by the powers, priorities, and strategies of the various designers.

(Wise, 1994, p. 85)

Given the nonprofit sector's capacity to be the space where interests are codified, defended, and advanced, they are "public-serving" organizations (Salamon, 2001) driven by their interests-centric missions.

Government-Corporation Relations

In early colonial America's Jamestown and some middle Atlantic colonies, British trading companies such as the Virginia Company and East India Company served as the primary colonizing agents. The early corporate-states were governed by these companies, which were eventually displaced as the settlements grew in size. The size and power of trading companies, most evident in their influence on British policies toward the colonies, led some colonists to distrust the role and influence that businesses and corporations might have in governmental affairs (Nace, 2005).

During the early decades of the United States, corporate power was reined in through the use of corporate charters sanctioned by individual states, which often adopted substantial constraints around a company's mission and functions. This era of government-corporate relations was marked as a time of strong governmental influence over a corporation's activities. Some have argued that government influence over corporations began to wane with the *Trustees of Dartmouth College v. Woodward* Supreme Court ruling of 1819. New Hampshire sought to turn Dartmouth College into a public institution and lost. This ruling initiated a steady shift in government-corporate relations, leading to the eventual treatment of corporations as legal citizens (*Santa Clara County v. Southern Pacific Railroad* (1886)), the overturning of charter limitations leading to development of a corporation's capacity to own other companies (Nace, 2005, p. 77), and having financial contributions equated with speech (*Buckley v. Valeo* (1976)). These authorizes have been extended through the Supreme Court's ruling in *Citizens United v. FEC* that restrictions on private and nonprofit independent political expenditures under the 2002 Bipartisan Campaign Reform Act (known as McCain-Feingold) were a violation of the free speech protections of the First Amendment. As a result of the *Citizens United* decision, limits on corporate contributions to political action committees (PACs) have been abolished and resulted in a drastic increase in the amount of contributions to PACs. These extensions of rights and privileges have

The boundaries created by early corporate charters included:

- Specification of performance function
- Life span ranging from 20 to 30 years
- Limited ownership rights
- Limited size
- Limited geographic scope
- Prohibition of intercompany ownership
- Performance criteria profit limitations

*Source: Nace (2005). *Gangs of America: The rise of corporate power and the disabling of democracy*. San Francisco: Berrett-Koehler Publishers.*

led some to assert that corporations wield too much power over the apparatus of governance (Nace, 2005).

Noting the coalescence of power in private firms, businesses, and corporations, Theodore Lowi observes that when “objective capitalistic practices are successfully employed privately for so many years . . . institutions develop around them, classes of wealth emerge, power centers organize” (Lowi, 1969, p. 4). In the late 1960s and early 1970s, Congress initiated some of the most extensive legislation related to the social regulation of business (Johnson, 2001), enacting over twenty major laws applying to social regulations, while passing statutes that initiated four more regulatory agencies (May, 2002) that would directly affect America’s corporations. Under the Reagan administration, however, the strengths of these agencies were diminished. Social regulations were crippled due to new protocols that limited the creation of new regulations, and the degradation of compliance enforcement for older regulations (May, 2002). The Reagan administration’s intent was to remove “the roadblocks that have slowed our economy and reduced productivity” (Reagan, 1981, para. 21), and extensively privatize as many government services as possible.

Private firms of all sizes and geographic locales have the capacity to organize their interests in attempts to influence how public problems are framed, policy solutions are selected and designed, and implementation decisions are made. These influences were accounted for in the early iron triangle model and more recently described as instances of “regulatory capture” (Peltzman, 1976).

Contemporary Trends Shaping Innovation in Governance Networks

Several social, political, and economic trends have shaped contemporary governance networks, including trends or “moves” to devolve, privatize, partner, and more recently, re-regulate and even nationalize. Some have argued that these trends have arisen out of the collective recognition of the “wickedness” of prevailing social, political, and economic problems, as well as apparent market and government failure. Multilevel, multiplex governance networks develop as a result of these trends.

We define multilevel and multiplex governance as interorganizational networks comprised of relatively stable patterns of coordinated action and resource exchanges (Rhodes, 1997; Sorensen and Torfing, 2008) aligned around one or more policy functions. Within multilevel and multiplex governance networks, organizational and institutional actors are likely drawn from the public, private, and nonprofit sectors, and across geographic planes (local to international) and relate through a variety of vertical and horizontal administrative arrangements.

The Persistence of Wicked Problems

Social, public, and economic problems are increasingly viewed as “wicked problems” that lack clearly formulated definitions and ascriptions of cause and effect, are addressed through incremental decision making (Lindblom, 1959), and are moderated through “bounded rationality” (Simon, 1957). Referring to the persistence of implementation failure within the United States, Robert Behn has asserted that “most failures in performance are failures of collaboratives,” recognizing that “in the United States, most public policies are no longer implemented by a single public agency with a single manager, but by a collaborative of public, nonprofit, and for-profit organizations” (2001, p. 72).

During the first decade of the twenty-first century, we find the failed performance of governance networks in the headlines. These performance failures include the poorly executed response and recovery efforts following landfall of Hurricane Katrina in 2005 (Koliba, Mills, and Zia, 2011—see Application L at the end of Chapter 9). This case highlights the challenges associated with applying the traditional structures of government bureaucracy to extremely complex and changing situations that call for the coordination of actors that span sectors and levels of government. During the decade following 9/11, the invasion and occupation of Iraq generated controversies surrounding the role of private security forces and their seeming lack of accountability to democratic control. The reconstruction of Iraq was marred by billions of dollars of cost overruns, some of which resulted from poorly structured and managed contracts. The financial and economic crisis that hit in the fall of 2008 mainly centers on the under-

Wicked problems:

- Lack a definitive formulation
- Have no stopping rule
- Have solutions that are not true or false, but better or worse
- Lack immediate and ultimate tests of a solution
- Do not have an enumerable (or an exhaustively describable) set of potential solutions, or a well-described set of permissible operations that may be incorporated into the plan
- Are essentially unique
- Can be considered to be a symptom of another problem
- The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution (Rittel and Webber, 1984).

regulations of “innovative” mortgage products. In 2013, the cause of the “BP Oil Spill” in the Gulf of Mexico was attributed to the failure in the federal government to regulate the oil extraction industry (Mills and Koliba, 2014—see Application M at the end of Chapter 9). These prominent cases underscore what we believe to be the proverbial tip of an iceberg. The challenges that we associate with managing in governance networks extend well beyond responses to catastrophic events or acts of war and occupation, failed responses to natural disasters, or failures in corporate regulation. These challenges may be found in any circumstance in which different actors, oftentimes with different operational characteristics, goals, and functions, work together to address any number of wicked problems that arise within the public domain. As we will note in Chapter 3, these challenges may be framed as the “principal-agent” problem.

The increasing complexity and wickedness of public problems (Rittel and Webber, 1984), the expansion of information technologies, and globalization have fueled interest in the application of network frameworks to the study of public administration, public policy, and governance structures. We focus on three identifiable trends and one short-term strategy that have influenced the development of governance networks, and will likely drive the proliferation of governance networks for many years to come. The first trend concerns the move to devolve government services and authority to lower levels of government. The second trend is the move to privatize or contract out. The third trend is the move to partnership. A fourth trend that has basically amounted to a short-term strategy, is re-emerging and may be characterized as the move to regulation, and perhaps even nationalize.

Growing evidence suggests that these trends continue to shape interjurisdictional landscapes and represent new kinds of reform with regard to how government interacts with for-profit and not-for-profit enterprises in the design and delivery of public services (Hula, 1999; Salamon, 2002b). In many cases, these reforms are geared toward seeking efficiencies in service production. In other cases, these reforms are advanced as “market solutions” or collaborative arrangements.

The Move to Devolve

Devolution is “based on the assumption that decisions are best made by people and governmental units closest to the problem” (De Vita, 1998, p. 213). The contemporary trends regarding the devolution of government services and funding to more local levels of government began in earnest in the early 1980s in the United States. In the United States, devolution “fortified the role of state government by making them the administrators of national policies in such fields as low-income health care, cash welfare, education policy, and transportation” (Hovey, 1999, p. 4). According to Sawicky, “if we exclude Social Security, Medicare, net interest on the federal debt, and defense from the total expenditures of federal, state and local governments in the United States, 80% of what remains is administered by state and local governments” (Krane, Ebdon, and Bartle, 2004, p. 514).

The devolution of federal funding to the states was a key strategy in the “Great Society” programs of the 1960s. From 1960 to 1980 there was an “unprecedented outpouring of financial aid to states and localities,” peaking in 1978 (Krane, Ebdon, and Bartle, 2004, p. 514). Beginning in 1980, funding from the federal government to the states began to decline, with federal grants-in-aid amounting to 26.5% of state and local spending in 1980 down to 19.1% in 1987 (Krane, Ebdon, and Bartle, 2004, p. 514). This second wave of devolution was predicated by the increasing decentralization of public services without substantial federal funding. Dale Krane and his associates have noted the ideological thrust of the Reagan administration that marked this area of devolution in the United States. “In many respects, Reagan viewed the national government as if it were the *Leviathan*, a ruler or government that systematically seeks to maximize budgetary resources, even over the opposition of the citizens. Devolution was the sword by which he could slay the beast (Krane, 1990)” (Krane, Ebdon, and Bartle, 2004, p. 519).

One consequence of devolution is the increasing reliance on regionalization, particularly in larger metropolitan areas. Writing about the trends impacting regionalization, David Miller observes that as “systems of local government are becoming more diffused or decentralized, they are becoming more coordinated . . . most lasting regional approaches emerge as negotiated agreements between

FACTORS CONTRIBUTING TO THE DEVOLUTION OF POWER TO SMALLER UNITS OF AMERICAN GOVERNMENT

- Too much federal government
- Loss of control and accountability
- Cookie-cutter policies
- Waste and inefficiency

Source: Hovey (1999). *The devolution revolution: Can the states afford devolution?* New York: Century Foundation.

players over time” (Miller, 2002, p. 4). The strong role that state governments play in mediating local government charters, particularly in states in which Dillon’s rule is being adhered to, has been recognized as significant in either helping or hindering the application of regionalization as a response to the devolution of powers.

The Move to Privatize

Stressing reforms to make governments operate more like businesses has been an ongoing subtext within the public administration field since Woodrow Wilson first suggested that public administration is a “field of business” (Rosenbloom, 2004, p. 446). Subsequently, those who study the functions and structures of government have looked to the private sector as a model of efficiency and a talent pool from which to recruit qualified public servants. We examined the public-private connections of public service creation earlier in this chapter and discuss how the public sector has coevolved along with the private and nonprofit sectors since the birth of the United States. We noted how power and authority between these sectors have evolved from early corporate charters (Nace, 2005) and voluntary associations (Couto and Guthrie, 1999) to the contemporary privatization movement (Moe, 1987; Donahue, 1989; Savas, 2005) and the “post-regulatory state” (Crawford, 2006) of the modern era.

The desire to run governments more like businesses became a central tenet of U.S. federal government reforms with the proliferation of extensive privatization efforts beginning in the 1980s and the “reinventing government” efforts of the 1990s. Instead of relying on government as the sole producer of public goods and services, the Clinton administration advanced a “new public management” paradigm that placed an emphasis on the use of markets and market forces to deliver public goods and services. Those calling for deference to markets and

market forces for the delivery of public goods and services “frequently begin with a reverential view of market competition and an assumption that such competition is superior to government monopoly. They assume that leaving things to the market will produce superior results” (Kettl, 2002, p. 491). As such, privatization became a commonly held, and sometimes dominant, perspective in the new public management paradigm.

Charles Wise has observed that “privatization is not a single policy but is an umbrella concept that has come to mean a variety of policies. These include transfer of ownership (sales of state-owned assets and enterprises); deemphasizing monopoly production of public services by introducing or increasing competition or reducing obstacles to it in the hope of increasing efficiency in the production of public services (contracting out portions of public activity); encouraging private production of services that are currently provided by government” (1994, p. 84). Privatization also “involves deregulation, policy decentralization, downsizing of government, outsourcing of public services and privatization of sectors previously assumed to be what economists called ‘natural monopolies’ including gas, electricity, telephones and so forth” (Linder and Rosenau, 2000, pp. 4–5).

There is strong reason to believe that recent reforms designed to turn more of the delivery of public goods and services over to market forces have led to profound shifts in how governments are structured and power is distributed. While the Congressional Budget Office (CBO) recently announced it could not quantify the number of federal contractors, it found that over \$500 billion was spent on contract services in 2012. An analysis by Bloomberg found that of the amount of federal resources spent on contractors, 63% was spent on services compared to 37% on products such as ammunition systems. This has led some to assert that private contractors have become the “fourth branch” of government (Shane and Nixon, 2007). In a study of the 1999 U.S. federal budget, Salamon found that only about 28% of the federal government expenditures supported the direct delivery of public goods and services, leaving the remaining 72% of expenditures used to support indirect policy tools (Salamon, 2002b). Table 1.2 shows that the percentage of direct delivery of public goods and services in 2015 increased to 42%, largely due to increases in spending on Social Security and Medicare. Despite this increase, over 58% of the federal expenditures and activity is achieved through indirect policy tools.

These kinds of shifts in service design and funding support suggest that nonprofit and for-profit organizations are increasingly taking on functions once reserved to the state sphere. Donald Kettl (2002) and Lester Salamon (2002b) have described this shift as moving from direct government to indirect government, suggesting that indirect government is facilitated through *indirect policy tools*. Policy tools are “instruments of public action” that “can be defined as an identifiable method through which collective action is structured to address

a public problem” (Salamon, 2002b, p. 19). We will explore how policy tools help to structure the “rules of the game” that dictate who participates and how they participate in governance networks.

As the result of the proliferation of indirect policy tools, Salamon concludes: “Public problem solving has become a team sport that has spilled well beyond the borders of government agencies and now engages a far more extensive network of social actors—public as well as private, for-profit as well as non-profit” (Salamon, 2002c, p. 600). Salamon and his colleagues have asserted that policy tools play a major role in shaping network structures, a claim that we revisit in later chapters (2002a).

Several reasons are given to explain the proliferation of indirect policy tools. Indirect policy tools are said to “inject a degree of competition into the provision of public services, breaking the monopoly of governmental agencies and thereby potentially improving service quality and ‘customer’ orientation” (Salamon, 2002b, p. 31). Thus, the use of indirect policy tools is viewed as an extension of the new public management perspective in public administration by favoring the infusion of markets and market forces into the delivery of public goods and services.

Indirect policy tools are said to “provide access to talents and resources” that are needed to cope with complex public problems (Salamon, 2002b, p. 31). The increasing reliance on indirect policy tools gets presented as a matter of building and drawing on social and human capital to address what are increasingly being perceived to be “wicked” and “swampy” public problems. Historically, the nonprofit and for-profit sectors have always been tapped to provide necessarily public goods and services (Cooper, 2003). In recent decades, the move to privatize has accentuated this codependence.

Privatization has also impacted the development of regulations and the regulatory dynamics that arise through them. Recent trends, fueled by deference to markets, have led to a move away from traditionally defined regulatory relationships, in which governments served as the principal authorities over their regulated agents, toward more collaborative arrangements, characterized in terms of self-regulation and “regulatory capture” (Peltzman, 1976). We will be describing these governance networks as regulatory subsystems that involve governmental and nongovernmental actors in some kind of regulatory relationship.

Lastly, indirect policy tools have been described as offering “a greater degree of flexibility, making it easier for government to experiment, to change course when needed, and thus to remain responsive to new needs” (Salamon, 2002b, p. 31). Indirect policy tools such as grants and contracts are used to foster experimentation and innovation. When these experimentations are most successful, learning and knowledge transfer result, and arguably, society is said to benefit.

Table 1.2 Scale of U.S. Federal Government Activity, by Tool of Public Action Fiscal Year, 2014

		<i>Amount (\$ bil.)</i>	<i>%</i>
Direct government	Goods and services	464.2	6.5
	Payments to individuals	2,091	29.5
	Interest	229.0	3.2
	Direct loans	173.9	2.5
Subtotal, direct		2,958.1	41.7
Indirect government	Contracting	447.5	6.3
	Grants	577.0	8.1
	Vouchers	251.0	3.5
	Tax expenditures	1,200	16.9
	Loan guarantees	345.5	4.7
	Government-sponsored loans	594	8.4
	Deposit insurance	96	1.4
	Regulation	621.9	8.8
Subtotal, indirect		4132.9	58.3
GRAND TOTAL		7091.0	100.0

Sources: Contracting Data from General Services Administration Federal Procurement Data System, FY 2014. Data on regulations from Office of Management and Budget Costs and Benefits of Regulation 2014 (2015). Data on deposit insurance from Federal Deposit Insurance Corporation Statistics on Banking. All other information from FY 2014 Federal Budget of the United States, analytical perspective and historical perspective tables.

INDIRECT TOOLS

- Inject a useful degree of competition into the provision of public services, breaking the monopoly of governmental agencies and thereby potentially improving service quality and “customer orientation”
- Provide access to talents and resources that are desperately needed to cope with complex public problems
- Offer a greater degree of flexibility, making it easier for government to experiment, to change course when needed, and thus to remain responsive to new needs (Salamon, 2002b, p. 31)

The work of E. S. Savas (2005) focuses on privatization of public services and public-private partnerships and reflects a “public goods” logic with regard to the design and implementation of public services. Savas (2005) asserts that “we are experiencing a reorientation of government, a redirection away from a top-down approach” (p. 328) “Privatization . . . is not merely a management tool but a basic strategy of societal governance” (p. 329). It is clear that governance in this perspective is one that seeks to deliver services in efficient and effective ways—through privatization and public-private partnerships.

The Move to Partner

The creative use of partnerships by public administrators allows for various stakeholders to jointly address seemingly borderless problems. Collaborative actions allow for both state and nonstate entities “to address certain kinds of highly complex problems that appear to be beyond the capacity of sovereign states alone to solve” (Karkkainen, 2004, p. 74). Partnering implies that there is a spreading of risk (Linder, 2000, p. 20) as well as common agreement around provisions to share or pool resources. Partnering is used to improve economies of scale and scope (Bovaird, 2004, p. 207). Partnership development has also become an intentional strategy for cultivating collective impact (Kania and Kramer, 2011), a point we will turn to in Chapter 11.

Governmental actors may use indirect policy tools as a way to structure or contribute resources to public-private partnerships. Public-private partnerships (PPPs) are intersector partnerships that have been pursued to foster innovation, experimentation, and flexibility. As social, environmental, and economic problems become more complex and wicked, public-private partnerships are being pursued as a means of shifting risks, sharing power, and leveraging resources across sectors (Linder and Rosenau, 2000; Bovaird, 2005; Brinkerhoff and Brinkerhoff, 2011).

Partnering involves sharing of both responsibility and financial risk. Rather than shrinking government in favor of private-sector activity through devolution of public responsibility, or other forms of load-shedding, in the best of situations partnering institutionalizes collaborative arrangements where the difference between the sectors becomes blurred.

(Linder and Rosenau, 2000, p. 6)

PPPs are a relatively recent development in governance network structures. Several reasons have been given for entering into PPPs. Table 1.3 illustrates Linder’s review of why PPPs form.

The PPP was first widely used in the United States to advance local economic development. Writing on the history of PPPs, Linder observes that “despite momentum gathered since the late 1980s . . . the partnership is not new to governance. More than a decade earlier, without the fanfare or reformist cachet, partnerships were deployed by the federal government in the United States as a tool for stimulating private investment in inner-city infrastructures.

Table 1.3 Rationale for Why Public-Private Partnerships Form

<i>Partnership As</i>	<i>Conceptions of Partnership</i>
Management reform	Chance for government to learn business practices from the private entity it is partnering with
Problem conversion	“Commercialize problems” so private firms will be enticed to solve them
Moral regeneration	Market forces will instill government bodies with virtues
Risk shifting	Leveraging of government ability whereby a private sector entity buys into a public project
Restructuring public service	Cutting through government red tape by moving from a public to a private workforce
Power sharing	Replaces the adversarial relationship between government and private firms with a give-and-take one

Compiled from: Linder, in Rosenau, Ed., *Public Private Partnerships*, MIT Press, Cambridge, MA, 2000, pp. 19–36.

Likewise, partnerships were key to coordinating federal initiatives in regional economic development. The record of these devices through the 1970s is at best mixed (Stephenson, 1991, pp. 109–127)” (Linder, 2000, p. 19).

The Move to Regulate and Rescue

Orbach defines regulation as “a binding legal norm created by a state organ that intends to shape the conduct of individuals and firms” (2012, p. 6). While regulation often refers to government intervention in the private domain, the origin of regulations varies widely across government. As Teske notes, “Sometimes these regulations are general decisions that are captured in laws or statutes and thus are the direct products of legislatures” (Teske, 2004, p. 5). While most casual observers look to laws enacted by Congress as a measure of the action taken by the federal government in a year, they often neglect the vast scope of action taken by administrative agencies. For example, Congress enacted roughly 300 laws in 2014 while federal agencies promulgated over 3,500 final rules during the same period.

Traditionally, compliance with regulations has been ensured through government-centered approaches to regulatory oversight that typically focus on specific, unyielding mandates that are ensured through inspections by agency personnel. However, more recently, alternative regulatory regimes, referred to as process-oriented (Gilad, 2010) or management-based regulation (Coglianese and Lazer, 2003), that focus on collaboration between the regulated firm and the regulatory agency through standard-setting and voluntary information disclosure have gained prominence. The shift from a government-centered to process-oriented regulatory regime has led to a proliferation of actors from the public, private, and nonprofit sectors involved in compliance, monitoring, and oversight functions previously reserved for government agencies. This proliferation of actors has drastically altered the “principal-agent” relationship between regulator and regulated firm to one that is increasingly collaborative, interconnected through networks of actors, and built upon the sharing of information related to the internal operation of the firm (Carrigan and Coglianese, 2011). This collaborative relationship between actors has led some to explore whether corporate actors have “captured” regulatory agencies—resulting in actions that are favorable to industry (Carpenter and Moss, 2013).

In 2008, the United States, and indeed the entire globe, experienced a shift in how collaborative self-regulatory regimes are viewed. The Obama administration called for a renewal of strong regulatory practices that may signal the reinvigoration of the state as a stronger authority. Deregulation has been cited as one of the causes behind the crisis in the real estate and credit markets, including the failure to intervene in the “housing bubble,” financial deregulation and unchecked financial “innovation,” private regulatory failure, and no controls

over predatory lenders (Weissman, 2008). The era of deregulation and self-regulation that has marked the most recent era of government reform may in fact be waning, at least for the financial services and automotive industries.

The “Great Recession” of 2008 to 2011 contributed to a rise in interest in and use of industry-wide subsidies as a tool to rescue or prop-up vulnerable industries. Specifically, the federal government spent \$431 billion through its Troubled Asset Relief Program (TARP) to purchase toxic assets and equity to stabilize the financial services industry. Additionally, the Treasury spent another \$80 billion in loans to General Motors and Fiat Chrysler to assist in their reorganization following massive layoffs and cuts in production. The move to rescue and subsidize failing automobile or financial service firms reasserts the observation that “corporations are essentially political constructs. Informally, they are adjuncts of the state itself” (Berle and Means, 1968, p. xxvii). The move to regulate and subsidize bears significant implications for governance network theory and research.

Donald Kettl has suggested that the financial crisis of 2008 had the potential to lead to the formulation of a new “social contract” between governments and industry (2009). The questions pertaining to the regulation of industry and the extent to which some industries pose to become “moral hazards” that are essentially too big to fail is, we argue, an enduring trend that shapes the structures and functions of governance networks. We recognize this claim by accounting for networks that are built as a result of regulatory and subsidy frameworks.

Critical Concerns

These trends are shaped largely through the proliferation of indirect policy tools (Salamon, 2002a; Kettl, 2002) that position particular governmental actors as members of networks comprised of actors from nonprofit and for-profit sectors. There is a great deal at stake when governments’ roles get “hollowed out.” Some of the democratic, administrative, accountability, and performance challenges that arise as a result of these changing dynamics are discussed in the final third of the book. These issues will be framed as some of the critical concerns of governance network analysis. Shaped by historical context, these concerns persist as lasting and enduring points of tension, opportunity, and necessity.

The Stakes: Withering State or Democratic Anchorage?

Concerns about the “hollowing out” of government generally center on the accountability and performance challenges that result from weakened state

How democratic are networks? How can we keep them democratically accountable?

authority (O'Toole, 1997a). The power centers of governance networks are, essentially, not located in government, but in a variety of interest groups who carry out their work through a variety of nonprofit and for-profit organizations. In writing about the increasing role that these interest groups play in the policy process, Theodore Lowi observed that the result may lead to an "impotent" government. He adds that "government that is unlimited in scope but formless in action is government that cannot plan. Government that is formless in action and amoral in intention (i.e. *ad hoc*) is government that can neither plan nor achieve justice" (1969, p. x). If governance networks form as unplanned, unintended, or *ad hoc* manifestations of incremental actions of interest groups (however they are defined, criticized or appreciated), the legitimate power and authority of the state is challenged. Those most concerned about the withering of state authority have framed their responses as critiques of the neoliberal and the new public management paradigms of public service that rely upon market incentives rather than public service motivations (Denhardt and Denhardt, 2003).

These critiques, coupled with ongoing concerns of hollowed out government, serve as cautionary tales, and that the collaborative arrangements found in certain kinds of networks should not be viewed as an inherent good (Bardach, 1998). Although collaboration may be a viable means for leveraging human and social capital and, as we will argue, building democratic anchorage, it can also be an ineffective means for delivering public goods and services. In the worst-case scenarios, collaboration can lead to decidedly undemocratic practices. We must account for the possibility that in the worst cases, collaboration can result in group think or collusion: a togetherness mentality lacking intelligent debate or a plotting together toward an unethical end.

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of two critical public administration concerns: the role of the state and the administrative functions undertaken by agents of the state. As a result of the proliferation of indirect policy tools and partnership strategies, “the state has become a differentiated, fragmented, and multicentered institutional complex that is held together by more or less formalized networks,” resulting in the blurring of boundaries between the public, private, and nonprofit sectors (Sorensen, 2006, p. 100). Some argue that, “the model of a unitary, state-centered hierarchical political decision making structure has always been a fiction, quite remote from real-life decision making” (Adams and Kriesi, 2007, p. 132).

Traditional views of government roles, responsibilities, and structures are not enough to account for the complexities inherent to modern governance systems. The proliferation of these networks leads to the blurring of the lines between public, private, and nonprofit sectors (Sorenson, 2006, p. 100). In this context, government agencies have been described as serving as “brokers” (Cooper, 2003, p. 47; also see Kettl, 2006) in addition to direct service providers and regulators. Governments have been described as playing roles as rowers *and* steerers (Denhardt and Denhardt, 2003); leaders *and* followers (Koontz et al., 2004); boundary spanners (Kettl, 2006); orchestrators, modulators, and activators (Salamon, 2002b); and mandaters, endorsers, facilitators, and partners (Fox, Ward and Howard, 2002) in governance networks. The extent to which these “new” roles are positive developments that are, in the long run, good for democracy is an unsettled matter. We need to ask some critical questions about these new roles, assessing how and to what extent the traditional responsibilities (or in some cases, the lack of responsibilities) assumed by the state are still relevant. This begs us to ask: Are governance networks contributing to the withering of the state and the sovereign authorities that it carries? Or does a positive assessment of governance networks hinge on the extent to which they remain democratically anchored?

Governance, as it is being used here and across the public administration and policy studies literature, is a concept deeply rooted in democratic theory that situates the state as a sovereign entity, vested with the legitimate power to use its authority for the betterment of the common good. At this point, it is unclear whether the expanded roles that governments take on in governance networks

REASONS TO BE OPTIMISTIC ABOUT NETWORKS

- Networks provide greater points of access for citizens and organized interests to be involved
- Market accountability may achieve greater efficiencies
- Collaboration builds capacity

REASONS TO BE CONCERNED ABOUT NETWORKS

- Insufficient democratic anchorage
- Regulatory capture (interest groups and political insiders manipulate the system for their own gains and to the disadvantage of those who do not have the resources to organize)
- Dark networks (inflict intentional social harm)
- Underperformance (don't achieve goals/results)
- Too complex to understand

undermine its capacity to bring its sovereign authority to the network. Some views of network governance assume that the state plays a state-centric role in the activities of governance networks, with government institutions serving as lead organizations. Others view the state as being in a weaker role, subjected to some combination of broader societal factors or market forces (Pierre and Peters, 2005). The extent to which the state brings its sovereign position to governance networks needs to be critical consideration, especially to those interested in public administration as a field of practice.

Weakened government authority in governance networks has been described as “governing without government” (Rosenau, 1992), the “postregulatory state” (Crawford, 2006), and the “disarticulation of the state” (Frederickson, 1999, p. 702). Cases of weakened state power may be found in advocacy networks’ influence over policy design, coordination, and implementation (Hula, 1999) and in instances of regulatory capture (Peltzman, 1976). Weakened state powers have been examined in studies of contract performance, oversight measures, and competitive bidding processes, while the advancement of PPPs as a strategy has been described by their critics as a potential “Trojan horse,” contributing to the steady erosion of state sovereignty (Miraftab, 2004).

Governments require adequate staffing and information and, arguably, the political will to enforce contracts and regulatory standards. They must be both responsive to and resistant against special interests, and negotiate the best deals on behalf of the public (Cooper, 2003). The political will to enforce contracts and regulatory standards is shaped, in part, by the formal and informal network relationships that occur between governments and the corporations and nonprofits that may attempt to exert political influence over contracting decisions. The same might be said for instances of regulatory capture as it exists between industries and their regulating governmental bodies.

For all intents and purposes, the complexity of governance networks can render them invisible, leading to a lack of transparency and the development of “centres of power and privilege that give structural advantage to particular private

interests in the process of making or shaping public policy decisions (Lowndes, 2001)” (Klijn and Skelcher, 2007, p. 588). Thomas Catlaw has, rightly, raised concerns regarding networks and the limits of democratic representation (2009). He asserts that networks can be a threat to democratic accountability for one of four reasons:

1. Their flexibility and informality can threaten legal and regulatory authority.
2. Elected officials are decentered in networks—they become just another actor in the network.
3. The dispersal of action and authority in networks can leave “no one in charge.”
4. Accountability to the network may displace accountability to higher aims and policy goals.

Others assert that the “death of the public bureaucracy” is vastly overstated (Agranoff, 2017), often arguing that public institutions are not only still relevant, but still wield extensive power to carry out public affairs (Goodsell, 2006). Still others view governance networks as offering “one route to enhanced [democratic] accountability precisely because it has the potential to draw more actors into a process of deliberative policy-making and implementation” (Klijn and Skelcher, 2007, p. 594). In this view, network structures are both complex and adaptive, and can “accommodate the changed nature of society and the complex policy problems it faces” (Klijn and Skelcher, 2007, p. 596). This complexity and adaptability can provide more “surface area” through which citizens and interest groups can enter and influence the actions of the network.

As we argued earlier in this chapter, the politics of structure (Wise, 1994) has historically existed between sectors. As governance network structures are used with increasing frequency, greater “institutional and management capacity [is] necessary to meet the many new challenges before us. That will, in turn, require hybrid institutions that can both carry out a variety of what might be regarded as traditional responsibilities of governance and, simultaneously, emphasize various kinds of contractual agreements, both formal and informal, as a critically important mode of operation” (Cooper, 2003, pp. 47–48).

A governance network’s capacity to support or hinder democratic accountability hinges on its capacity to be what Eva Sorensen and Jacob Torfing (2005) describe as “democratically anchored.” They assert that “governance networks are democratically anchored to the extent that they are properly linked to different political constituencies and to a relevant set of democratic norms that are part of the democratic ethos of society” (2005, p. 201). Similarly, the concept of “public value” has been advanced in terms of network governance (Bryson, Crosby, and Bloomberg, 2014). Stoker observes that “the judgment of what is public value is collectively built through deliberation involving elected and

appointed government officials and key stakeholders. The achievement of public value, in turn, depends on actions chosen in a reflective manner from a range of intervention options that rely extensively on building and maintaining network provisions” (2005, p. 42). In Chapter 10, we discuss the extent to which democratic anchorage of a governance network can be construed as a matter of degree, rather than in absolute terms.

Governments play a critical role in governance networks by funneling symbolic power and cultural authority to the network; informing public perceptions of the network, lending it legitimacy; allocating distinctive (tactical) resources and providing sources of information through which interests are pursued; and serving as a backup of last resort with regard to other forms of control (Crawford, 2006, p. 459). States contribute to the democratic anchorage of a governance network most directly through the privileged position that elected officials play as representatives of a territorially defined citizenry. If government actors play informal or weak roles in a governance network, the democratic anchorage that they bring to the network will be limited. The resultant networks tend to “resist government steering, develop their own policies and mold their environment” (Kickert, Klijn, and Koppenjan, 1997b, p. xii). Thus, we may conclude that governments are critical actors in governance networks if they maintain a sufficient level of democratic anchorage. Regardless, we must also recognize the roles that nonprofit organizations play as voluntary associations comprising civil society and facilitating democratic participation processes. We will also consider the ways in which corporations and businesses are accountable to a variety of stakeholders and social pressures. These considerations materialize in the adoption of “triple bottom line” standards and corporate social responsibility initiatives. All of these matters will be addressed in Chapter 10.

Government participation in governance networks is not, unto itself, the only critical consideration that we will address over the course of this book. Governance networks pose significant challenges to those concerned about their effective and efficient functioning. We discuss these challenges in terms of certain descriptive, administrative, accountability, and performance considerations.

Categorical Considerations

Having performed an extensive analysis of the literature relating to interorganizational networks, Provan, Fish, and Sydow conclude that “no single grand

What are governance networks? How are they structured? What functions do they carry out?

theory of networks exists” (2007). More recently, Börzel has described the current state of affairs in network studies in public administration and public policy as a “Babylonian variety” of networks (2011, p. 49). Jenny Lewis notes that the literature in network governance is “rife with disparate typologies and conflicting terminologies” (Lewis, 2011, p. 1221). The interorganizational networks described in this literature are often of such complexity that it is difficult for one single theory to account for all possible variables and combinations of variables. George Frederickson observes that the current phase of theory development is “neither theoretically tidy nor parsimonious,” and “at this point there isn’t a single theory that puts its arms around third party governance” (Frederickson, 2007, p. 11). The sheer range of theoretical constructs that can conceivably be marshaled to describe governance networks calls for interdisciplinary approaches to the study of governance networks. Such an undertaking calls for some measure of comfort with ambiguity, and the potential for combining and recombining conceptual frameworks often associated with one theoretical tradition or another. The lack of theoretical tidiness around governance networks (and its related terms) may provide opportunities for conceptual innovations, a point we take up in Chapter 11. A lack of theoretical tidiness should, ultimately, be mitigated as more empirical evidence is collected, a point that we will address in Chapter 12.

In this book, we synthesize a diverse array of theoretically defined, and in some cases empirically tested and tuned, conceptual frameworks derived from a body of literature found across the sociology of organizations, organizational development and change, social network, systems theory, and complexity theory literature. We also draw heavily upon the multiple paradigms of public administration and management theory, policy network theory, and policy stream and governance models.

In a 1997 article titled “Treating Networks Seriously,” Laurence O’Toole called for three kinds of theoretical and empirical developments needed to bring governance networks into sharper focus (O’Toole, 1997b, p. 48): (1) Determine what networks, and what kinds of networks, can be found in today’s administrative settings; (2) examine the historical dimension of network formation and development; and (3) explore the array of networks in a broadly comparative perspective. Throughout this book we directly tackle O’Toole’s first objective, introducing a relatively comprehensive, but admittedly theoretically untidy, set of frameworks to describe mixed-form governance networks. In Chapter 2, we discuss some of the historical dimensions of network formation in relation to developments in intergovernmental and intersectoral ties. By contributing to the development of network descriptors, we hope to ultimately assist in the development of the field’s capacity to carry out comparative analysis of governance networks of mixed forms.

A summary of the major conceptual developments that are relevant to governance network theory is provided in Table 2.1. As a result of our review of this literature, several conceptual questions are evident. Some of these questions emerge out of what appears to be conceptual contradictions apparent across the literature. We frame these conceptual challenges below as critical questions to guide governance network analysis.

The differentiation of markets, hierarchies and networks: Are hierarchies and markets forms of networks, or should networks be considered distinct from them? The first question may be characterized in terms of the application of the term *networks* in relation to what some have described as alternatives to other macro-level organizational forms: hierarchies and markets. As we will discuss in Chapter 2, two schools of thought exist regarding the relationship between networks, hierarchies, and markets. One school of thought views networks solely in terms of the inherent nature of their horizontal ties, and another school of thought views hierarchies and markets as variations of network form. We argue that the former position limits our capacity to describe, compare, and evaluate network configurations that possess certain combinations of vertical, horizontal, and competitive ties within them.

Administrative authority: How do we account for mixed (vertical and horizontal) administrative ties in networks? If networks are to be conceived as comprised of both vertical and horizontal relationships, as is recognized in Robert Agranoff and Michael McGuire's (2003) case studies of local community economic development networks, and in the literature on network management (Koppenjan and Klijn, 2004), then it becomes important to develop a conceptual framework that accounts for mixed forms of administrative authority. The question of mixed authorities is posed in terms of the need to develop a theoretical framework of public administration that establishes authority for networks that work across vertical and horizontal ties.

Sectoral composition: How do multisector arrangements function in networks? Grant and contract agreements, regulatory systems, and public-private partnerships have been described as involving actors from across the public, private, and nonprofit sectors. The importance of cross-sector relationships has been described in terms of boundary blurring (Kettl, 2006), as instances of regulatory capture (Peltzman, 1976), and most recently, in the context of re-regulation and nationalization. The implications of the hollowed state have been framed as classical trade-offs between markets and democracy (Stone, 2002), governments and businesses (Moe, 1987), and public funding and charitable giving (Horne, Van Slyke, and Johnson, 2006). The apparent "sector blurring"

that arises also raises important questions pertaining to public and democratic accountability, suggesting that the relationship between sectoral characteristics and the roles, resources, and influences they bring to governance networks needs to be understood.

Policy functions: How do we account for networks taking on functions related to multiple policy streams? Some network configurations have been associated with policy functions ascribed to a particular segment of the policy cycle (Patton and Sawicki, 1986) or policy stream (Kingdon, 1984). Early renditions of the iron triangle and issue networks, for instance, focused on the roles of interorganizational networks in the problem-framing and policy creation phases (Heclo, 1978). Drawing on studies of policy implementation (O'Toole, 1990), network configurations have also been associated with post-enactment phases. However, the line between pre- and post-enactment phases of the policy cycle is rarely discrete. Jon Kingdon's policy stream model offers a nonlinear approach to policy development and implementation. According to Kingdon, agendas are set and policy windows open when various components of the policy stream (problems, policies, and politics) couple. He alludes to the roles that network configurations play in facilitating this coupling. The relationship between network configurations and policy functions needs to be addressed. We suggest that Tony Bovaird's (2005) classifications of policy functions offer guidance in this regard.

Geographic scale: What roles do the geographic scale of network actors and the nature of public problems play in determining governance network structures and functions? Governance networks will likely defy clear demarcation of jurisdictional boundaries. Individual network actors may be accountable to a predefined constituency at local/municipal, county, state, federal, or international geographic scales. The scale of each actor combines, commingles, or competes with the scale of the problem that a governance network addresses. Governance networks may have a spatial focus at local scale (e.g., a brownfield remediation), but they may contain members from outside the local scale. Or conversely, a governance network's focus could be global (e.g., addressing global climate change), but it may contain very localized actors. Governance networks may also defy political or administrative boundaries, as in the case when watersheds or air sheds defy traditional jurisdictional and administrative boundaries. Many governance networks arise out of the need to address boundary conflicts. In this book, we argue that systems analysis and complexity science can provide clues to untangling the paradoxes of geographic scale within which governance networks operate in real-world situations.

Social scale: How do we account for actors of mixed social scale operating within a network? A question arises when the social scale of network actors is considered. These considerations have been recognized by modelers in terms of questions of scalability (Miller and Page, 2007). In their view, interorganizational networks are, essentially, complex adaptive systems that are comprised of social actors understood across multiple social scales: individuals organized into groups, groups organized into organizations and institutions, organizations and institutions organized into interorganizational networks. We consider the extent to which this “nested complexity” is evident in the extensive case studies and models of interorganizational networks that have been undertaken. These cases often describe the roles that organizations; groups—task forces, committees, and teams; and individuals play in the networks. The resulting nested complexity needs to be not only recognized, but also highlighted with regard to mixed actor operations.

Administrative Considerations

How are networks governed? What does it mean to manage a network?
To manage within a network?

Theodore Lowi defines administration as “a process of self-conscious, formal adaptation of means to ends. Administered social relations are all those self-conscious and formal efforts to achieve a social end, whether expressed as a general condition like predictable conduct, legality, productivity, public order, or as a more concrete organizational goal” (1969, p. 30).

At this point, we know very little about how power, decisions, and collective actions that comprise administrative functions unfold within partnerships, strategic alliances, and other collaborative arrangements. Likewise, we know little about how power, decisions, and collective actions unfold across contractual and regulatory relationships (Feiock, 2013). Principal-agent, social network, and social capital theories may be used to understand how cooperation and collaboration exist as essential features of network management.

Governance networks have been described as taking on certain configurations of administrative authority that shape the flow of power between them. Robert Agranoff and Michael McGuire’s studies of community development networks highlight the role that vertical and horizontal relationships play within them (2003). Conceptual frameworks designed to analyze social power dynamics are

abundant, and can be found across the literature of virtually every social science. Of particular interest to us are the kinds of conceptual frameworks that describe the flow of administrative power and authority within or across organizations.

Drawing on theories of social exchange (Rhodes, 1997) and the definitions of administrative power as discussed across classical public administration, management, and organizational development studies, power is viewed as being predicated on the coordination of the flow of resources that get exchanged across network partners (nodes). This is particularly true when one node controls the flow of resources (be it funding, information, etc.) to other actors within the network.

We can find examples of vertical resource control dating back to Weber's first introduction of bureaucratic theory, where we find considerations of power being explored as a matter of supervisor-subordinate relations. Classical organization development theory, found in the works of Fayol (1930) and Gulick (2004), and later in the works of Simon (1957) and others, establishes the basis for describing the "command and control" structures of bureaucracies. More recently, principal-agent theory has emerged from economics and studies of contractual arrangements to provide a picture of vertical relations as they exist in social networks (Eisenhardt, 1989; Milward and Provan, 1998). Principal-agent theory has been used to highlight the roles that informational asymmetries and "shirking" behaviors persist, and underscores such phenomena as regulatory capture. In addition to the vertical and horizontal vectors of relational power, we must recognize the possibility that the structure of power relations between two or more actors in a governance network may be comprised of a mixture of both vertical and horizontal relations. With greater access to information, agents possess a measure of power over their principals, positioning the agent as more of a negotiating and bargaining partner. Although principals may possess formal vertical authority, informally, they must rely on the development of horizontal ties, oftentimes through extensive negotiation and bargaining.

In regard to shared power or horizontal resource control and relations, there is a growing body of literature that explores the nature of power in terms of the voluntary bonds forged through shared values and norms. Social psychologists, sociologists, and more recently, behavioral economists have studied how cooperative behaviors come about. Social capital and game theories are particularly useful here. Beginning with Robert Axelrod's now classic iterated prisoner's dilemma experiments conducted in the early 1980s, game theorists have studied the nature of cooperative and collaborative behaviors that manifest between two social actors construed as equals or peers (1980).

In an attempt to provide a synthesis of the trends in public administration and management shaping network governances, Table 1.4 provides a brief overview of the relationship between the classical public administration (PA), new public management (NPM), and collaborative public management with a network administration framework that combines all of them.

Table 1.4 The Convergence of Four Public Administration Paradigms into Governance Network Administration

<i>Public Administration Paradigm</i>	<i>Dominant Administrative Structure</i>	<i>Dominant Administrative Dynamics</i>
Classical public administration	Public bureaucracies	Command and control (e.g., pure principal-agent)
New public management	Public bureaucracies or private firms	Competition concession and compromise (e.g., the principal-agent problem)
Collaborative public management	Partnerships with private firms, nonprofits, and citizens	Collaboration and cooperation Concession and compromise (overcoming the principal-agent problem through the establishment of co-equal ties)
Governance network administration	Multilevel, multiplex governance networks	All forms of administrative dynamics

Given the existence of multilevel and multiplex ties in existence within most governance networks, Donald Kettl observes: “The basic administrative problem [becomes] developing effective management mechanisms to replace command and control” (2002, p. 491). According to Kettl, networked public managers “have to learn the points of leverage, change their behavior to manage those points of leverage, develop processes needed to make that work, and change the organizational culture from a traditional control perspective to one that accommodates indirect methods” (2002, p. 493). Although classical paradigms in public administration have tried to distinguish administration from politics, in the networked environs of the “disarticulated state” (Frederickson, 1999), politics is understood as an integral feature of administrative action. According to March and Olsen, “Politics can be seen as aggregating individual preferences into collective actions by some procedures of rational bargaining, negotiation, coalition formation, and exchange” (1995, p. 7). A conceptual framework is needed to account for the fragmented and dynamic confluence of multiple forms of administrative authority that emerge in networked environs.

The blurring of sector boundaries leading to more dynamic authority structures found in governance networks has led to serious reconsiderations of managerial roles and functions, which in turn has led to reconsiderations of accountability (Mashaw, 2006; Papadopoulos, 2010; Koliba, Mills, and Zia 2011; Mills and Koliba, 2015) and performance (Frederickson and Frederickson, 2006; Koliba, 2013). The development of the governance network as an observable and, ultimately, analyzable phenomenon has been suggested as a means through which to establish management and administrative practices that can contribute to a richer understanding of cross-jurisdictional relations that are characterized by both vertical and horizontal relations. Because of the combination of mixed-form authority structures that persist in governance networks, the classical public administration considerations of public bureaucracies and command and control forms of management are still very relevant. In multilevel, multiplex governance networks, public bureaucracies still play a very pivotal role, even within the most highly decentralized governance networks. Their cultures and command and control of hierarchical structures help shape the public bureaucracies' participation in governance networks. Because governance networks often engage actors from multiple social sectors, including those private firms guided by markets and market forces, new public management (NPM) considerations of public-private partnerships, contracting out, and reliance on market forces are useful in the study of governance networks. The central premise behind NPM is to bring market efficiencies to the delivery of public goods and services.

Governance networks are also likely to involve some collaborative alignments, oftentimes directly with citizens. The emerging body of literature pertaining to "collaborative public management" (Agranoff and McGuire, 2003; Bingham and O'Leary, 2008) and collaborative governance (Ansell and Gash, 2008; Emerson and Nabatchi, 2015) is very relevant as well, and needs to be woven into a differentiated theory of network management. The ongoing studies of collaborative management and collaborative governance deepens our understanding of the kind of skills, attitudes, and dispositions needed to foster effective horizontal administrative relationships.

A picture of network management is emerging that may be described as the combination of "governance and public management in situations of interdependencies. It is aimed at *coordinating strategies of actors with different goals and preferences with regard to a certain problem or policy measure within an existing network of inter-organizational relations*" (Kickert, Klijn, and Koppenjan, 1997a, p. 10). Effective network management requires the use of all forms of administrative dynamics, including command and control, competition, concession and compromise, and collaboration and cooperation. We conclude that all three historical PA paradigms are useful to the study of governance network management and combine to form the basis of a network management framework. A dilemma only surfaces when we constrain our assumptions to one paradigm.

Although there are many different ways that social power has been framed, we view administrative power within governance networks as being wielded through the representation of authority. Power flows in social networks through authority wielded *against, over, shared, and negotiated between* two or more nodes in a social network. Taking into account the complexity of relational ties that are possible in governance networks, Eva Sorensen and Jacob Torfing argue that the policy actors may not “be equal in terms of authority and resources (Mayntz, 1993, p. 10). There might be asymmetrical allocations of material and immaterial resources among the network actors” (2008, p. 9).

Accountability Considerations

To whom are actors operating within a network accountable? To whom are governance networks accountable? How much democratic anchorage do they have?

As we have noted, in polycentric governance systems the “state has become a differentiated, fragmented, and multicentered institutional complex that is held together by more or less formalized networks.” The proliferation of these networks leads to the blurring of the lines between public, private, and nonprofit sectors (Sorenson, 2006, p. 100). Sector blurring is complicated by the multiple ways in which administrative authority is structured. “The current public governance problem is how to ensure that third parties, who often have independent bases of political power, asymmetric information, potentially conflicting goals, and only partial views of the public interest (Posner, 2002; Salamon, 2002b), act in ways that meet public goals” (Stone and Ostrower, 2007, p. 427).

Considering the potential for sector blurring that may occur in some governance networks, we must consider how and to what extent distinctions between the accountability structures of the governments, for-profit firms, and nonprofit organizations contribute to the development of network-wide accountability regimes. We must recognize that accountability in democratic societies has traditionally been predicated on the legitimacy that accompanies the kinds of sovereign entities found in local, state, and national governments. This has resulted in a substantial shift from accountability predicated on governments to accountability predicated around complex network dynamics occurring within and across governance networks. These considerations beg for more discussion concerning the fate of state sovereignty and the qualities of democratic anchorage that have been traditionally ascribed to it.

Many have noted how the shift from a monocentric system of *government* to a polycentric system of *governance* raises some serious accountability challenges (Behn, 2001; Posner, 2002; Page, 2004; O'Toole and Meier, 2004b; Goldsmith and Eggers, 2004; Pierre and Peters, 2005; Scott, 2006; Mashaw, 2006; Mathur and Skelcher, 2007; Papadopoulos, 2010). Because it can no longer be assumed that the state possesses the same kind of authority as traditionally ascribed to public organizations, governing these interorganizational networks gives rise to new accountability challenges. These challenges arise when states are displaced as central actors, market forces are considered, and cooperation and collaboration are recognized as integral administrative activities. We introduce a tripartite accountability framework (Figure 1.2) for discerning how accountability is structured within governance networks that include democratic, market, and administrative accountability frames, through which eight accountability types may be identified based on which stakeholders “to whom” accounts are rendered.

Discerning the accountability structures amidst the complexity that persists in cross-sector, cross-jurisdictional settings requires us to consider the dynamics at work when the accountability structures of one network actor commingle, compete, or complement the accountability structures of other network actors. As a result of unpacking these dynamics, we may be able to ascertain the extent to which “hybrid accountability regimes” (Mashaw, 2006, p. 118) emerge within governance networks.

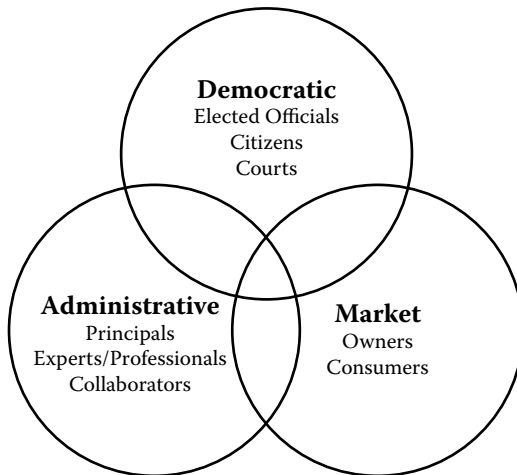


Figure 1.2 Tripartite Model of Governance Network Accountability.

Performance Considerations

Are governance networks successful? Effective? Who determines what high performance looks like?

We have already noted how Robert Behn has asserted that “most failures in performance [of policy implementations] are failures of collaboratives,” recognizing that “in the United States, most public policies are no longer implemented by a single public agency with a single manager, but by a collaborative of public, nonprofit, and for-profit organizations” (2001, p. 72). In recent years, we find the failed performance of governance networks screaming across the headlines, ranging from troubles with the response and recovery efforts following the landfall of Hurricane Katrina, to gross malfeasants relating to defense contracting in Iraq. These cases highlight the challenges associated with applying performance standards associated with the traditional structures of government bureaucracy to extremely complex and changing situations that call for the coordination of actors that span sectors and levels of government. We assert that these headline-grabbing cases underscore what we believe to be the proverbial tip of the iceberg. The challenges that we associate with managing in governance networks extend well beyond responses to catastrophic events or acts of war and occupation. These challenges may be found in any circumstance in which different actors, often with different operational characteristics, goals, and functions, work together to address any number of wicked problems within the public domain.

There have been some studies that look at the efficacy of network structures in achieving ascribed outputs or outcomes (see as representatives: Marsh and Rhodes, 1992; Heinrich and Lynn, 2000; Koontz et al., 2004; Imperial, 2005; Frederickson and Frederickson, 2006; Rodriguez et al., 2007; Koliba, Mills, and Zia, 2011; Mills and Koliba, 2014). We conclude from some of these studies that governance networks may be ineffective organizational strategies for achieving public outputs or outcomes. Despite these cases, identifying network-wide performance measures appears to be a very big challenge here.

Focusing on governance network performance management may be one way to guard against the proliferation of ineffective networks and lead to improvements in public policy outcomes, deepened citizen engagement, the provision of some measure of transparency, and the equitable distribution of power, and sustain effective networks (Bovaird and Löffler, 2003, p. 322). Definitions for what constitutes effective outcomes of governance networks will need to be addressed.

The performance measures of a governance network may be oriented toward fostering greater citizen access to the apparatuses of governance; it may build social ties and social capital that lay the foundation for future collaborative undertakings; or it may legitimize the activities of the governance network itself. Thus, we are left to consider that if we were ranking the kind of performance outcomes ascribed to a specific governance network, the capacity of the governance network to foster greater democratic connectivity would be at the top of the list. Creating democratic anchorage may be framed as the process goal, becoming an ultimate outcome for the governance network. Such process outcomes are often embodied in efforts to promote “good governance,” a governance framework that is defined by Bovaird and Löffler as “the negotiation by all stakeholders in an issue (or area) of improved public policy outcomes and agreed governance principles, which are both implemented and regularly evaluated by all stakeholders” (2003, p. 316).

Building an argument for interpreting network performance as one based on process indicators may be difficult. Although the conceptualizations of social ties may be intuitively accessible to all, rarely do processes dynamics capture the interest or attention of those to whom accounts need to be rendered. Much more needs to be done by researchers and educators to inform critical stakeholders about the importance of the kind of good governance that comes via the democratic anchorage of governance networks. Very often, these efforts are framed in terms of developing performance measures designed to achieve “results” (Durant, 2001).

The development of performance measures, however, hinges on how the governance network defines the problem, i.e., what social, political, economic, physical, chemical, and biological factors are assessed as key causes of the policy problem that need to be addressed by a governance network. Ulrich (1998) calls this management choice the “system of concern” or “boundary judgment.” We call this dynamic the phenomenon of micro- or macro-scoping: micro-scoping occurs when a governance network shrinks its spatial and temporal boundaries to define a system of concern (or define a policy problem). Conversely, macro-scoping occurs when a governance network expands the boundaries of a system of concern. Micro- or macro-scoping leads to a differential development in the choice of performance measures by a governance network. We explore this issue in more detail in Chapter 10.

Viewed outside the context of governance network, performance measurement initiatives face a number of challenges that have been summarized by Robert Durant as:

Confusion around outputs and outcomes; inadequate training and technical know-how for developing performance measures; lack of resources for measurement design, data collection and monitoring;

different expectations about what performance measures are designed to do and for what they will be used; fear by agencies that they will be asked to develop outcomes measures for results that are not easily measured, that are shaped by factors outside their control . . . and, that are not amenable to assigning responsibility to particular actors.

(Durant, 2001, pp. 702–703)

Studies of performance measurement initiatives across governance networks accentuate all of these factors as major challenges to applying performance measurement frameworks to the networks (Posner, 2002; Page, 2004; Frederickson and Frederickson, 2006).

Determining how performance is defined between collaborators is complicated by the capacity of collaborators to possess their own unique perspectives around what matters, what counts, and why. As Page puts it, “Reasonable people may disagree about which results to measure, and appropriate data can be difficult to track” (2004, pp. 591–592). Despite these challenges, the application of performance measurements to governance networks is important because of the links between measurement and accountability. Those to whom accountability must be rendered may be inclined to rely on certain kinds of performance measurement data (construed here in terms of both quantitative and qualitative forms) in the execution of their obligations as accountants. We will argue that governance networks are guided by the existence or lack of certain hybridized accountable regimes.

Note

- 1 (2006, p. 13).

Chapter 2

Defining the Governance Network as a Unit of Analysis

Call it a clan, call it a network, call it a tribe, call it a family: Whatever you call it, whoever you are, you need one.

—Jane Howard¹

In this chapter we look at how the public administration and policy studies fields have employed network metaphors and network analysis tools to describe the range of interorganizational configurations that have arisen to create, implement, and evaluate public policies. In order to orient the reader to understanding the role that network structures play, we begin with an overview of social network analysis as it has evolved within the social sciences. We discuss how the concept of the social networks as a configuration of social actors has been a mainstay of classical sociology and management studies. We then synthesize the extensive literature that has applied network and systems metaphors and analytical tools to the study of public administration and public policy and draw inferences around which a theoretical framework may be developed. We then make a case for using the term *governance networks*.

Social Network Analysis

Network metaphors and analytical tools are being used widely across all fields of natural and social science (Barabasi, 2003; Borgatti et al., 2009; Barabasi, 2016).

The prevalence of network configurations as a dominant natural and social structure should hardly be a revelation to most readers. What is “new” is our heightened capacity to apply network metaphors and tools of analysis to the study, design, implementation, and monitoring of the networks that persist across the natural and social domains.

Network analysis has been a staple of social science research for many decades. Alfred Radcliffe-Brown was the first to make the case that *any* observation of social phenomena needs to be anchored in “the patterns of behavior to which individuals and groups conform in their dealings with one another” (1940, p. 228). Network concepts have a long and rich history of being used to study organizational form and the diffusion of information across social structures. Berry et al. (2004) trace the origins of social network analysis to the early Hawthorn experiments of 1924 to 1932, marking the first use of “network configurations to analyze social behavior” (p. 540). These social experiments are often cited as an important milestone in the evolution of management and organizational development theories. This legacy leads us to conclude that network analysis has been a part of our field for quite some time and even embedded within our classical studies of bureaucratic hierarchies.

Noted anthropologist Radcliffe-Brown is credited with first using the network metaphor to draw links between natural and social phenomena. In a speech given in 1940 to his contemporaries he asserted:

Social structures are just as real as are individual organisms. A complex organism is a collection of living cells and interstitial fluids arranged in a certain structure; and a living cell is similarly a structural arrangement of complex molecules. The physiological and psychological phenomena that we observe in the lives of organisms are not simply the result of the nature of the constituent molecules or atoms of which the organism is built up, but are *the result of the structure in which they are united*. So also, the social phenomena which we observe in any human society are not the immediate result of the nature of individual human beings, but are the result of the social structure by which they are united.

(1940, p. 223)

Radcliffe-Brown’s observations here underscore a central challenge facing researchers looking to apply network metaphors and analytical tools to the study of any social or natural phenomena: the relationship between the parts of the system and the system as a whole. As we consider the relationship between the parts of a governance network and the governance network as a whole, we will need to view a governance network as being more than the sum of its parts. The extent to which the characteristics and actions of individual nodes (e.g., the network’s parts) help to shape the actions of the network as a whole is

an extremely important, albeit complicated, consideration. Despite the self-organizing, autonomous capacity of a governance network's nodes, whole networks unto themselves need to be treated as active organisms operating of their own volition. This assertion is often associated with the premise of network "holism." Degenne and Forse (1999, p. 5) lay out the three propositions of holism common to any network form:

- a. Structure takes precedence over the individual [nodes].
- b. Structure cannot be reduced to the sum of individual actions.
- c. Structure exerts absolute constraint on individual actions.

The joint, coordinated actions that occur between nodes of networks need to eventually be understood in terms of acts of the network as a whole. The matter gets complicated by the challenges posed by differences in scale that can occur between nodes in social networks.

Thomas Catlaw considers use of "the network" as a metaphor for human relationship. He notes that the network can serve as a root metaphor that "has come to be 'a fundamental image of the world from which models and illustrative metaphors may be derived' (Brown, 1976, p. 170)" (2009, p. 481).

The network metaphor is a powerful symbol for comprehending complex natural and social phenomena. However, Catlaw and others have noted how it also runs the risk of being overused, employed to explain nearly every phenomenon. Some fear that "networks have become a ubiquitous metaphor to describe too many aspects of contemporary life. And in so doing, the category has lost much of its analytical precision" (Thompson, 2003, p. 2). We must, cautions Graham Thompson, be concerned about analytical precision if we are to effectively translate the network metaphor into an analytical tool to guide managerial and design decisions.

Contemporary social network analysis has been used to study the diffusion of knowledge, beginning with Coleman, Katz, and Menzel's ground-breaking study of information diffusion in physician networks (1977), while Stanley Milgram's "small world" research is often cited as an important breakthrough in social network analysis, demonstrating the "six degrees of separation" that exist between any two people (1967). Over the last few decades, the progress of social network analysis has benefited from advances in statistical methods and high-speed computing (Barabási, 2016).

Empirically, network structures are described in terms of "nodes" tied together through some form of coordinated action or resource exchange (Figure 2.1) (Wasserman and Faust, 1994; Rhodes, 1997). In social networks in particular, nodes can exist across several levels of social scale: from the "micro" level of ties between individual people, to the more "macro"-level interorganizational relationships.

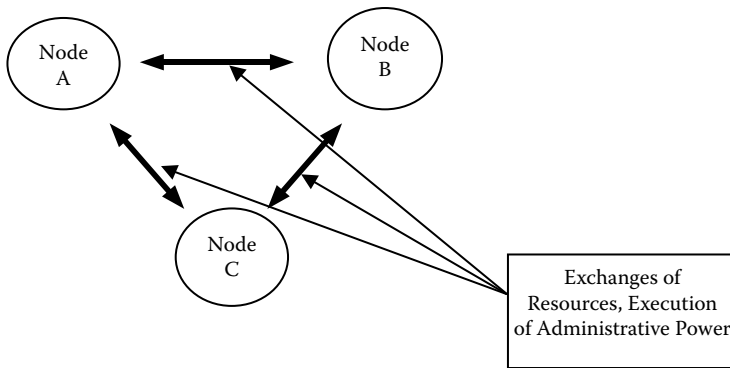


Figure 2.1 Nodes and Ties.

Governance networks may be described at any one level of social scale: as networks individuals, groups, *or* organizations. However, governance networks can also be described in terms of their “multilevel” properties: as being comprised of individuals, groups of individuals, *and* organizations.

Interorganizational Networks in Public Administration, Policy, and Governance Studies

There have been many explicit efforts to employ network concepts to the study of complex social structures that arise when public policies are made, implemented, and monitored within the policy studies and public administration fields. Hugh Heclo (1978) is credited with first applying the term *network* to the study of public policy and administration with his introduction of “issue networks” (Rhodes, 1997). Heclo presented the issue network concept in reaction to what he found to be the more restrictive (and less pervasive) “iron triangles”—the relatively closed networks of government agencies, legislative committees, and interest groups.

Interorganizational networks have been implicated in descriptions of policy or government “subsystems” (Baumgartner and Jones, 1993), the advocacy coalition framework (ACF) (Sabatier and Jenkins-Smith, 1993), policy coalition (March and Olsen, 1995), and policy network (Rhodes, 1997; Kickert, Klijn, and Koppenjan, 1997b; Koppenjan and Klijn, 2004). This literature in particular has employed elements of system dynamics and resource exchange theory to the study of interorganizational network configurations. Since 1990, we also find interorganizational networks described across much of the policy implementation (Gage and Mandell, 1990; O’Toole, 1997b; Hill and Hupe, 2002),

intergovernmental relations (O'Toole, 2000; Wright, 2000), and policy tools (Salamon, 2002a) literature. Interorganizational networks have also been described as third-party government (Salamon, 2002b; Frederickson and Frederickson, 2006), public sector networks (Agranoff, 2007), governance networks (Sorensen and Torfing, 2005, 2008; Bogason and Musso, 2006; Klijn and Skelcher, 2007), cross-sector collaborations (Bryson, Crosby, and Stone, 2006), public management networks (Milward and Provan, 2006; Frederickson and Frederickson, 2006; Agranoff, 2007), and certain kinds of strategic alliances (Wohlstetter, Smith, and Malloy, 2005).

More recent literature on interorganizational networks has focused on developing conceptual clarity between three strands of network literature: policy networks, network management or service delivery, and network governance. For example, recent work by Klijn and Koopenjan (2015) explores the intellectual terrain around each of these well-established bodies of literature and seeks to identify unique conceptual characteristics of each. The policy networks literature (e.g., Lubell and Fulton, 2007; Park and Rethemeyer, 2012) explores the patterns of interactions between stakeholders involved in a policy decision-making process (often referred to as arenas or games) to develop shared solutions. Network management scholarship (e.g., Milward and Provan, 2003; McGuire and Agranoff, 2011) focuses on the set of actions taken by network managers to manage organizations involved in the provision of public services and goods. Finally, the network governance approach presented in this book examines the set of actors that collaboratively control and govern the provision of public goods and services including the strategic and operational decision-making process.

Interorganizational networks have also been described in terms of the functions that they perform, whether service contracts, supply chains, *ad hoc* channel partnerships, information dissemination, civic switchboards (Goldsmith and Eggers, 2004), problem solving, information sharing, capacity building and service delivery (Milward and Provan, 2006), learning and knowledge transfer (McNabb, 2007), or civic engagement (Yang and Bergrud, 2008). Interorganizational networks have also been described as existing across many policy domains, including social service delivery (Provan and Milward, 1995; Milward and Provan, 1998), land use planning (Koontz et al., 2004), watershed management (Leach and Pelky, 2001; Imperial, 2005; Lubell and Fulton, 2007), health care (Frederickson and Frederickson, 2006; Rodriguez et al., 2007), transportation (Albert, Gainsborough, and Wallis, 2006; Mills, Koliba, and Reiss, 2016), emergency management (Comfort, 2002; Kapucu, 2006a; Koliba, Mills, and Zia, 2011; Kapucu and Garayev, 2013; Nowell and Steelman, 2014), fossil fuel extraction regulation (Mills and Koliba, 2014), community economic development (Agranoff and McGuire, 2003), and food systems (Sporleder and Moss, 2002; Smith, 2007; Jarosz, 2004; Koliba and Wiltshire, 2016). In addition to these uses of network metaphors and tools of analysis, particular types of network

configurations have been described in the literature, including interest group coalitions (Hula, 1999), regulatory subsystems (Krause, 1997; Mills and Koliba, 2015), grants and contract agreements (Kelman, 2002; Cooper, 2003; Goldsmith and Eggers, 2004), private associations (Mills, 2016), and public-private partnerships (O'Toole, 1997b; Linder and Rosenau, 2000; Bovaird, 2005).

While highlighting these distinctions is vital to our ability to develop and test theory, a focus on how to analytically evaluate the performance, management, and design of governance networks (and the public values underlying their creation) is also needed. To do so, we offer this book that seeks to address the nuances of governance networks that are embedded in the different perspectives outlined above: policy networks, network service delivery and network management. From this approach, the student or participant in governance networks can begin to understand and examine experiences in the network as part of an individual, collective or system-wide perspective. Each of these perspectives are operating at the same time. Governance networks also operate differently at the same time and agendas of stakeholders are often multiple and complementary or contrary to network interests. We will note later that networks may be coupled with multiple policy functions where participants can have significant roles in and cross more than one network. While researchers or practitioners are keen on selecting one perspective or another for research (theory testing) or management (implementation effectiveness) purposes, we feel the multiplicity of these perspectives serves as a combined understanding of governance experiences that envisions a way to improve governance operations through the recognitions of the triangulation of viewpoints.

Networked Properties of Governance Processes

The concept of “governance” has been in the lexicon of political science for some time. Summarizing the history of the term, Pierre defines governance as “the empirical manifestation of state adaptation to its external environment” as well as denoting “a conceptual or theoretical representation of co-ordination of social systems and, for the most part, the role of the state in that process” (2000). An even more generic use of the term can be found in Hirst, who defines governance as “the means by which an activity or ensemble of activities is controlled or directed, such that it delivers an acceptable range of outcomes according to some established social standard” (Hirst, 1997, p. 3). A more macro-level view of governance construes the process of social coordination and control as an integral dimension of public policy making and implementation. In this larger, democratic context, “governance refers to sustaining co-ordination and coherence among a wide variety of actors with different purposes and objectives such as political

actors and institutions, corporate interests, civil society, and transnational organizations.” To this end, “governance could be said to be shorthand for the predominant view of government in the *Zeitgeist* of the late twentieth century” (Pierre, 2000, pp. 3–4).

Beginning in the latter quarter of the twentieth century, the public administration field has seen a conceptual shift away from a singular focus on unitary *government’s* delivery of discrete policies to that of processes of *governance* (Cleveland, 1972; Frederickson, 1999). This shift has paralleled the incorporation of network metaphors in public administration and policy studies. As a result, governance, rather than government, takes into account the “lattices of complex network arrangements” (Frederickson and Frederickson, 2006) that arise when networks are said to form. Governance dynamics align interorganizational network structures to the public policy process, “whether ‘upstream’ in policy-making, ‘midstream’ in policy implementation, or ‘downstream’ in policy enforcement” (Bingham, Nabatchi, and O’Leary, 2005, p. 553).

Over the last several decades, an interdisciplinary body of governance studies literature has emerged across the public administration, policy studies, nonprofit management, and corporate governance fields. Variations of governance in public administration, and policy studies in particular, have been described in terms of the “new governance” (Durant, 2001; Salamon, 2002a), “third party governance” (Salamon, 2002b), “collaborative governance” (Ansell and Gash, 2008), “public governance” (Stone and Ostrower, 2007), or “meta governance” (Sorensen, 2006). A substantial focus on network governance (Rhodes, 1997; Lynn, Heinrich, and Hill, 2000; Goldsmith and Eggers, 2004; Provan and Kenis, 2008; Sorensen and Torfing, 2008) has emerged. Within most public administration, public management, and public policy literature, governance has been understood as a construct either loosely or tightly tied to the role of the state (and its governmental institutions) as central actors in the network (Pierre and Peters, 2005).

The shift from government to governance within the public administration literature has coincided with the new public management movement and the accompanying “reinvention” and “reengineering” initiatives tied to it (Durant, 2001). New governance frameworks have been advanced, designed to account for the prospects for “market solutions” to address pressing social problems (Durant, 2001). Others have focused on how third parties impact governance arrangements (Salamon, 2002b). New governance frameworks are also informed by conceptualizations of the quasi-legislative and quasi-judicial tools used to garner greater citizen participation within governing networks (Bingham, Nabatchi, and O’Leary, 2005).

Public governance is another term ascribed to those interorganizational networks somehow tied to the policy process (Lynn, Heinrich, and Hill, 2000; Bovaird and Löffler, 2003; Stone and Ostrower, 2007; Osborne, 2010). “Public

Table 2.1 Major Conceptual Developments in Governance Network Theory since 1990

<i>Conceptual Ground Covered</i>	<i>Author(s)</i>
Intermittency of network coordination; importance of the goal orientation of network members. Differentiates between intermittent and permanent network coordination. Discusses the goal orientation of network members, how members are linked and aligned around common efforts, and network-wide purposes.	Gage and Mandell, 1990; Mandell and Steelman, 2003
Collective action theory; institutional analysis and development (IAD) framework. IAD presents an integrated framework for linking conditions, attributes, and rules to actions and patterns of interaction. Provides the basis from which to understand collective action and resource pooling.	Ostrom, 1990, 2007; Feiock, 2013
Implementation networks. One of the first to look at the whole network level, distinguishing between degrees of hierarchy and levels of integration found in governance networks, with an explicit focus on the role of networks for policy implementation.	O'Toole, 1990
Conceptual distinction made between hierarchies, networks, and markets.	Powell, 1990
Integrated systems analysis within a public policy framework by drawing on negative and positive feedback concepts to describe systems dynamics. Discusses system stability and change in terms of agenda-setting processes that are evidenced by instances of punctuated equilibrium through which rapid changes to the system are evidenced. Asserts that systems dynamics can be viewed in terms of any policy domain.	Baumgartner and Jones, 1993
Advocacy coalition framework (ACF); power concentrating in clustered elites. ACF relies on the roles that informal ties between "policy elites" play within and across policy subsystems. In this model, policy elites form clusters, which in turn form into organized interest groups. Emphasizing more the functional capacities of the policy subsystem itself, ACF does not analyze the policy subsystem as an interorganizational network. However, ACF does anticipate the role that coalitions and coalition formation plays as a matter of the development of formal network ties between organizational and institutional actors.	Sabatier and Jenkins-Smith, 1993

Table 2.1 Major Conceptual Developments in Governance Network Theory since 1990 (continued)

<i>Conceptual Ground Covered</i>	<i>Author(s)</i>
Policy diffusion can be propagated through networks.	Berry and Berry, 1999
Public service delivery is often carried out through networks.	Provan and Milward, 1995
The increasing reliance on networks leads to the propagation of the “hollow state.”	Milward and Provan, 2003
Bringing attention to the governance of policy networks, Rhodes describes how policy networks can be characterized as degrees of network stability, the relative openness of network membership, and the role of vertical and horizontal articulation of network relationship.	Rhodes, 1997
Policy network characteristics are first laid out, along with network management functions. Kickert et al. define policy network characteristics in relation to rational, classical, and network perspectives. Juxtaposes differences between the new public management paradigm and emergent network management paradigm. Highlights the role of game theory in network management, later expanded by Koppenjan and Klijn.	Kickert, Klijn, and Koppenjan, 1997b; Koppenjan and Klijn, 2004.
Highlighting the importance of network closedness, Schaap and van Twist distinguish between social and cognitive closedness, underscoring the importance that the orientation of individual network members plays in determining the degree of closedness found within governance networks.	Schaap and van Twist, 1997
Highlighting the macro- and micro-level tools that structure and manage governance networks De Bruijn and ten Heuvelhof discuss how tools are instruments that can be used both to influence goal-oriented processes and to create the conditions that facilitate the mutual formulation of targets.	De Bruijn and ten Heuvelhof, 1997
Podolny and Page advance the notion that networks are an inherent organizational structure within all organizational forms, including hierarchies and markets.	Podolny and Page, 1998

Table 2.1 Major Conceptual Developments in Governance Network Theory since 1990 (continued)

<i>Conceptual Ground Covered</i>	<i>Author(s)</i>
Salamon asserts that policy tools shape network structures. Suggests ways in which the characteristics of macro-level policy tools help to shape network structures and functions.	Salamon, 2002b
Agranoff and McGuire introduce a set of micro-level “public action tools” that are used to support vertical and horizontal collaborative management activities. These public action tools are later elaborated on by Agranoff, and Silvia and McGuire.	Agranoff and McGuire, 2003; Agranoff, 2007; Silvia and McGuire, 2010
Keast, Mandell, Brown, and Woolcock distinguish between formal and informal bonds that form through network ties.	Keast, Mandell, Brown, and Woolcock, 2004
Goldsmith and Eggers lay out some considerations for how network configurations may be shaped through grant and contractual agreements. They pay particular attention to the role that communication technologies play in facilitating coordinated action and resource exchange, differentiating between types of technologies based on levels of collaborative technologies and their consequences.	Goldsmith and Eggers, 2004
Koppenjan and Klijn situate the development of policy networks within the context of wicked problems, and the range of uncertainties that result from them. Relying heavily on game theory, they break down the relationship between the realm of uncertainty that occurs across the domains of content, process, institutions, and governance, and the types of decision-making structures that occur within complex network arrangements. Actor characteristics and behaviors are described. A vision of network management emerges based around the cultivated capacity of network managers to leverage and manage the range of games that emerge within and across interorganizational arrangements.	Koppenjan and Klijn, 2004
Several studies highlight the role of governments in networks, framing government roles in terms of following, encouraging, and leading. Suggests relationship between government strategy and network configuration.	Koontz et al., 2004; Pierre and Peters, 2005; Klijn and Skelcher, 2007

Table 2.1 Major Conceptual Developments in Governance Network Theory since 1990 (continued)

<i>Conceptual Ground Covered</i>	<i>Author(s)</i>
Milward and Provan distinguish between service implementation, information diffusion, problem-solving, and community capacity-building networks, differentiating networks based on core operational functions undertaken within interorganizational networks.	Milward and Provan, 2006
Democratic anchorage of governance networks. Sorensen and Torfing discuss the role of democratic accountability and “democratic anchorage” in networks in terms of elected officials’ roles, citizen participation, and democratic norms. Builds on the work of March and Olsen.	Sorensen and Torfing, 2005; March and Olsen, 1995
Frederickson and Frederickson identify key variables that they use to interpret how performance measurement systems are used across federal health care networks. These variables include the degree of directness of government involvement, the alignment of health care networks with federal purposes, the degree of network articulation of authority and control, network goal characteristic, and levels of goal agreements, and the level of centralization of policy implementation.	Frederickson and Frederickson, 2006
Provan, Fish, and Sydow assert that “goal-directed” networks are evident when particular configurations of networks convene around the pursuit of specific shared goals and objectives.	Provan, Fish and Sydow, 2007
Drawing on the factors used in network analysis, Provan, Fish, and Sydow further discuss the roles that actor centrality and relational betweenness play in shaping network structures.	Provan, Fish, and Sydow, 2007
Provan and Kenis introduce the network governance model, based on three forms of interorganizational coordination: shared governance, lead organization, and network administrative organization.	Provan and Kenis, 2008

Table 2.1 Major Conceptual Developments in Governance Network Theory since 1990 (continued)

<i>Conceptual Ground Covered</i>	<i>Author(s)</i>
Agranoff distinguishes between types of actions and decisions made across public management networks. Recognizing the link between decision making and actions, he differentiates between information exchanges, agenda setting, research report and study writing, the facilitation of forums, strategic planning, reviewing of plans, adjusting policy or program designs, and creating new public policies.	Agranoff, 2006 2007
Several scholars advance theories relating to the role of networks in collaborative governance regimes and collaborative management.	Ansell and Gash, 2008; Emerson and Nabatchi, 2015; O’Leary and Bingham (Eds.), 2009
Catlaw suggests that networks can serve as a potential threat to democratic legitimacy. Their flexibility and informality can threaten legal and regulatory authority. Elected officials are decentered in networks—they become just another actor in the network. The dispersal of action and authority in networks can leave “no one in charge.” Accountability to the network may displace accountability to higher aims and policy goals.	Catlaw, 2009
Folke et al. first suggest that networks are a critical feature of governance adaptation. Loorbach anticipates the role of networks in “transition management.”	Folke et al., 2005; Loorbach, 2007
Koliba, Mills, and Zia and Papadopoulos develop an accountability model organized around democratic (elected representatives, citizens, and the legal system), market (owners and consumers), as well as administrative (bureaucratic, professional and collaborative) relationships.	Koliba, Mills, and Zia, 2011; Papadopoulos, 2010
Agranoff synthesizes the literature on managing networks in the public sector to offer a book that addresses “the changing role of the public agency and its interlocutors in the light of externalization.” Agranoff offers an understanding of the “new public organization” that calls upon coordinating and facilitating networks. His closing chapter is devoted to network performance through collaboration.	Agranoff, 2012

Table 2.1 Major Conceptual Developments in Governance Network Theory since 1990 (continued)

<i>Conceptual Ground Covered</i>	<i>Author(s)</i>
Turrini et al. provide a framework for assessment network properties and network performance.	Turrini et al., 2010
Pahl-Wostl suggests how learning can permeate across networks. Collective learning occurs when there is a change in the shared mental models among network actors. First mention of double-loop learning in governance networks.	Pahl-Wostl, 2009
Raab, Mannak, and Cambré discuss the “configurational approach” to network analysis by using Qualitative Comparative Analysis (QCA). Networks are understood as configurations of strategy/goals, governance mode, structure, people and management processes. Effectiveness is tied to the fit between the configuration and the external environment.	Raab, Mannak, and Cambré, 2013
Feiock’s institutional collective action framework provides a framework for understanding the “fragmented authority” dilemma of network governance and the range of integration mechanisms that mediate the extent to which network actors join or exit networks, while also providing frameworks for the coordination of collective action. This framework has most often been applied to studies of metropolitan and regional governance.	Feiock, 2013
Several modelers apply governance network framework in object oriented agent based models.	Maroulis et al., 2010; Zia and Koliba, 2013
Nowell and Steelman demonstrate the role of network embeddedness in network performance, drawing on Granovetter’s (1985) notion that embeddedness is the ongoing contextualization of economic exchanges in social structures.	Nowell and Steelman, 2014
Scheinert, Koliba, and Zia confirm the existence of multiplex ties in governance networks.	Scheinert et al., 2015
Klijn and Koppenjan, both major contributors to the study of governance networks, offer a comprehensive understanding of the field with this publication.	Klijn and Koppenjan, 2015

governance entails (a) looking up to the broader authorizing environment that established policy and legal parameters in which implementation takes place and (b) looking down to the operating environment where daily policy implementation takes place” (Stone and Ostrower, 2007, p. 430). Authorizing environments are described as shaped by the “rights, rules, preferences and resources that structure political outcomes” (March and Olsen, 1995; Bogason and Musso, 2006, p. 5). Operating environments are said to be shaped by the managerial considerations that arise within vertically and horizontally aligned network actors (Agranoff and McGuire, 2003; Heinrich, Hill, and Lynn, 2004; Rodriguez et al., 2007). These views of the new governance and public governance frameworks assume that the state plays a state-centric role in the activities of governance networks (Pierre and Peters, 2005). However, other models of governance have been proposed that view the state in a weaker role, subjected to some combination of broader societal factors or market forces (Pierre and Peters, 2005).

The rationale for *participatory governance* and *collaborative governance* is rooted in a number of concerns, including the decline in social capital (Putnam, 2000), the decline in citizen participation (Macedo et al., 2005) and inherent need for principled engagement (Emerson and Nabatchi, 2015), the role and power of experts and expert knowledge (Yankelovich, 1991; Fischer, 2000), the intractability of “wicked problems,” and the ingrained conflicts that persist between stakeholders. These and other concerns have been cited as factors feeding into this renewed interest in collaborative governance through deliberative democracy tools (Henton and Melville, 2008, pp. 6–7; Emerson and Nabatchi, 2015).

Advocates of participatory governance mechanisms seek to take advantage of the greater number of access points afforded ordinary citizens in some complex governance network structures. If governance networks can accommodate greater citizen involvement and, ultimately, allow for citizens to exert influence over them, the democratic anchorage of the networks can be assured, leading to, what some argue is, greater “public confidence in government and the public’s willingness to expand its ‘comfort zone’ for new solutions and policy directions in which government plays a part” (Henton and Melville, 2008, p. 4).

Archon Fung (2006) offers a way to interpret participatory strategies with respect to the democratic outcomes of legitimacy, justice, and effectiveness of public action. He addresses participatory designs based upon ranges of three governance dimensions: participant selection, communication and decision, and authority and power. In this effort, each design is examined in light of the ability to achieve democratic outcomes. Fung argues that “no single participatory design is suited to serving all three values simultaneously; particular designs are suited to specific objectives” and that “direct participation should figure prominently in contemporary democratic governance” (Fung, 2006, p. 74).

Citizen administration consensus-oriented deliberation (Yankelovich, 1991) continues to receive a great deal of attention that suggests a basis for optimism in neighborhood councils (Berry, Portney, and Thomson, 1993; Kathi and Cooper, 2005), urban neighborhoods (Fung, 2006), and a number of other sectors, such as participatory budgeting (Weeks, 2004) and environment and land use planning (Lukensmeyer and Torres, 2006). There is also attention to citizen-centered collaboration in local governance that seeks ever evolving public-involving strategies (Cooper, Bryer, and Meek, 2006).

While there is a great deal of optimism with regard to the promise and exercise of the various kinds of participatory governance, there remain a number of issues concerning how participatory governance is designed and implemented. One concern centers upon the political nature of governance, where participatory governance cannot overcome the trade-offs between democratic values and norms, and pragmatic realities fueled by the desire for greater efficiencies or tacit power struggles (Roberto, 2004). Another concern is related to the way in which participatory governance is designed and perhaps misapplied by government. Klijn and Skelcher (2007) note how some of this literature “starts from the theoretical premise that networks are predominantly characterized by horizontal relationships, self-steering and pluralism, and that too easily draws an association with deliberative forms of democracy, when, in essence, their dynamics are inherently more complex” (p. 605). Citizen governance strategies that are mandated by law, such as public hearings and citizen advisory boards, may influence governance practices very differently from strategies that are based on citizen-centered or bottom-up initiatives. Rodriguez et al. (2007) studied the dynamics within governance networks devised to coordinate the delivery of health care within Canada. Quasi-governmental boards worked with networks of large, regional hospitals and local health clinics, all of which were forced through legislative mandate to collaborate in an effort to coordinate health care delivery within their regions. They found that in this setting, at least, top-down oversight from the quasi-governmental board was needed in order to advance and deepen coordinated activities. In those instances in which actors were left to reach consensus around objectives of their own volition, tangible results were hard to come by (Rodriguez et al., 2007). Thus, any logic of governance constructed for governance networks needs to account for both vertical and horizontal relationships that exist within them (Heinrich, Hill, and Lynn, 2004; Stone and Ostrower, 2007, p. 425).

A related concern is the use of participatory governance strategies for bureaucratic rather than network-wide interests. A factor hampering the proliferation of deliberative forums concerns the coupling of deliberative processes to tangible decision making within the governance network itself. The results of citizen deliberations may be effectively communicated to actors within the governance network, only to have this feedback summarily ignored or reframed

to meet the desired ends of the real power brokers within the network. In essence, deliberative forums may do more to co-opt citizens than provide them with real power within networks.

In this book, we view governance as a property of the interorganizational network. In order to adequately describe how these networks are governed, we view governance as a matter of systems dynamics. In this manner we look upon governance, much like Emerson and Nabatchi (2015) have done, in terms of inputs, outputs, and feedback mechanisms. In Chapter 7 we tie the concept of governance to classical systems theory, in which governance may be understood as the processes that regulate the flow of feedback to and within the social system (Katz and Kahn, 1978; Emerson and Nabatchi, 2015). Such feedback may be derived through the internal dynamics occurring across the network or unfolding within individual actors of the network. Feedback may also be directed to the system from its external environment or be grounded in the internal dynamics that unfold between network actors.

Rod Rhodes (1997) was one of the first scholars to deeply consider the relationship between governance and interorganizational networks, arguing that governance occurs as “self-organizing phenomena” shaped by the following characteristics:

1. *Interdependence* between organizations. Governance is broader than government, covering nonstate actors.
2. *Continuing interactions* between network members, caused by the need to exchange resources and negotiate shared purposes.
3. *Game-like interactions*, rooted in trust and regulated by rules of the game negotiated and agreed by network participants.

Governance, therefore, is characterized by the interdependency of network actors, the resources they exchange, and the joint purposes, norms, and agreements that are negotiated between them over time. Phillip Cooper describes the evolving forms of governance that result from the accumulation of joint actions this way:

The point has increasingly been to move away from the use of mechanisms of authority and toward governance by agreement, whether that means negotiated arrangements with regulated enterprises, service contracts with profit-making or nonprofit nongovernmental organizations, interjurisdictional agreements with other agencies of government at any level, [or] service agreements with citizen clients. (Cooper, 2003, p. 47)

Summing up the current state of understanding of governance as a property of networks, Stone and Ostrower conclude: “Those who study governance must

regard it as a nested or multilayered construct (Ostrom, 1990; Lynn, Heinrich, and Hill, 2000; Milward and Provan, 2000; O'Toole, 1997a, 2000). Governance occurs at several interrelated levels of analysis and necessarily involves multiple actors" (2007, p. 424). These assertions lead to the supposition that governance becomes "the property of networks rather than as the product of any single centre of action (Johnston and Shearing, 2003, p. 148)" (Crawford, 2006, p. 458).

Over the past several years a "logic of governance" (Lynn, Heinrich, and Hill, 2000) for governance networks has emerged from the literature that places "performance or outcomes of public programs at the individual or organizational level as the ultimate dependent variable" (Stone and Ostrower, 2007, p. 423). This logic of governance has also emphasized the role of the public administrator as the guardian of sound, good governance practices, and the importance of hybrid accountability regimes of the network (Mashaw, 2006).

As a synthesis of the literature, we offer seven characteristics concerning the structures and functions of interorganizational networks operating across public administration and policy studies:

1. Networks facilitate the *coordination of actions* and *exchange of resources* between actors within the network.
2. Network membership can be drawn from some combination of *public, private, and nonprofit sector actors*.²
3. Networks may carry out one or more *policy functions*.
4. Networks exist across virtually all *policy domains*.
5. Although networks are mostly defined at the interorganizational level, they are also described in the context of the *individuals, groups, and organizations* that comprise them.
6. Networks form as the result of the selection of particular *policy tools*.
7. Network structures allow for *government agencies* to *serve in roles other than lead organizations*.³

These characteristics form the fundamental basis of developing an understanding of interorganizational governance networks. In Table 2.1 we highlight some of the important milestones in policy network and governance network development.

Networks as Markets and Hierarchies

With roots in the multigovernment context of the European Union (Jessop, 2004), governance network theory originated out of the Dutch school of governance (Pierre and Peters, 2005), which combines policy network frameworks (Heclo, 1978; Rhodes, 1997), elements of systems and network analysis, and

democratic theory. The role of the state, its institutions, and sovereign obligations in interorganizational networks has become one of the central considerations of governance network theory (Sorensen and Torfing, 2005; Bogason and Musso, 2006; Klijn and Skelcher, 2007; Sorensen and Torfing, 2008). Governance networks have been described as possessing a degree of “democratic anchorage” (Sorensen and Torfing, 2005) that hinges on the extent to which there are links to elected officials, ordinary citizens, and democratic norms.

Sorensen and Torfing (2005) assert that governance networks can take many different forms: “They can either be self-grown or initiated from above. They might be dominated by loose and informal contacts or take the form of tight and formalized networks. They can be intra- or interorganizational, short-lived or permanent, and have a sector-specific or society-wide scope” (Sorensen and Torfing, 2005, p. 197).

Governance networks may be described in terms of systems and subsystems. Baumgartner and Jones conclude that “the American political system is a mosaic of continually reshaping systems of limited participation. . . . Some are strong, others are weak . . . created and destroyed” (1993, p. 6). Although we recognize how some interorganizational networks exist as informal, dynamic “issue networks” (Heclo, 1978; Rhodes, 1997) or “policy subsystems” (Baumgartner and Jones, 1993) created and destroyed with some measure of frequency, we will be focusing on those interorganizational governance networks that are relatively stable, emerging as the result of combinations of certain policy functions, policy tools, and policy actors. Early forms of governance networks may first exist as loosely coupled, informal issue networks, only to merge as stable, more formally recognized arrangements.

At the cross-institutional level, interorganizational arrangements are often referred to as networks and have been discussed as a third kind of organizational form in comparison to two existing forms: hierarchies and markets. Two schools of thought exist regarding the comparisons among these organizational forms. The first, adhered to by Sorensen and Torfing (2005, 2008), as well as others who have introduced network analysis to public administration (O’Toole, 1997b; Goldsmith and Eggers, 2004; Provan, Fish, and Sydow, 2007; Provan and Kenis, 2008), posits that hierarchies, markets, and networks are distinct organizational forms from one another. Because much of traditional social network analysis has emphasized the role of horizontal ties, the network gets introduced as its own form of macro-level social structure alongside of hierarchies and markets. In this view, networks are akin to collaborative arrangements or partnerships. Proponents of the hierarchy, market, *and* network model often view macro-level networks as relatively recent governance phenomena built around the establishment of cooperative ties.

A second view posits that markets and hierarchies are variations of network form (Hill and Lynn, 2005; Heinrich, Lynn, and Milward, 2013; Bardach, 2016).

In this view, “markets and hierarchies are simply two pure types of organization that can be represented with the basic network analytic constructs of nodes and ties (Laumann, 1989)” (Podolny and Page, 1998, p. 58). “From a purely structural perspective,” this view considers that “the trichotomy among market, hierarchy, and network forms of organization is a false one” (Podolny and Page, 1998, p. 58). In both natural and social networks “clustering” of nodes tends to take place. Ravasz and Barabasi have noted how these clusters may be described in terms of hierarchical structures, suggesting that hierarchy is an inherent phenomenon of network structures (2003). In addition, the notion of the “network organization” (Borgatti and Foster, 2003) has been advanced, suggesting that network dynamics exist within any form of social organization. Writing about the relationship between hierarchies and networks, Frederickson and Frederickson observe: “It is not so much that networks have replaced hierarchies but more that standard hierarchical arrays, or parts of them, have often been enmeshed in lattices of complex networks arrangements (O’Toole, 2000; Agranoff and McGuire, 2003)” (Frederickson and Frederickson, 2006, p. 12).

Markets have been widely recognized as networks of buyers and sellers, arranged in their own latticework of marketing, sales, manufacturing, and service functions. The basic buyer-seller dyad is based on laws governing economic activity and norms associated with buyer preference and taste. Classical economic theory is built on assumptions about the relationship between buyers and sellers, as well as between competitors. As maximizers of their personal utility, market sellers compete for their market share. Buyers and sellers need to cooperate with one another in order to engage in an exchange of goods and services. In an attempt to get the best value or maximize profit, each actor in the network may engage in negotiation and bargaining.

Viewed in terms of their network and systems features, markets exhibit the more emergent and essentially scale-free elements of any of the three macro-level forms. Writing about the dynamics of market exchange systems, F. H. Knight observes:

[The exchange system’s] most interesting feature is that it is automatic and unconscious; no one plans or ever planned it out, no one assigns the participants their roles or directs their functions. Each person in such a system seeks his own satisfaction without thought of the structure of society or its interests; and the mere mechanical interaction of such self-seeking units organizes them into an elaborate system and controls and coordinates their activities so that each is continuously supplied with the fruits of the labor of one vast and unknown multitude in return for performing some service for another multitude also large and unknown to him.

(Knight, 1965, p. 29 in Porter, 1999, p. 15)

Knight's description of market dynamics may be critiqued for its idealization of market interactions. March and Olsen, after all, have noted how certain "voluntary" exchanges found in market interactions can be coerced (1995, p. 10). The predilection that markets are populated by a multitude of "economic men" acting on their own personal utility-maximizing interests is being heavily critiqued within the literature in behavioral economics, social and community psychology, and sociological studies of market-like behavior (Gneezy and List, 2006). Decision making combines aspects of reasoning, perception, and intuition (Kahneman, 2003).

In order to represent markets and hierarchies as variations of network forms, and still account for the existence of cooperative ties, we may distinguish between markets, hierarchies, and collaboratives, with the latter being interorganizational network structures that rely on norms of trust and reciprocity. For a summary of the characteristics of the three forms of macro structures discussed, see Table 2.2. Those collaborative structures emerging within the policy stream take the form of public-private partnerships (Linder and Rosenau, 2000; Bovaird, 2005; Brinkerhoff and Brinkerhoff, 2011), strategic alliances (Wohlstetter, Smith, and Malloy, 2005), cross-sector collaborations (Bryson, Crosby, and Stone, 2006), and interest group coalitions (Hula, 1999) in the literature. Although many governance networks get shaped, in part, by the organizational structures of the actors that comprise them, we suggest that all governance networks possess, to one degree or another, certain collaborative characteristics, and demonstrate how this is so, empirically, throughout the examples of applications of governance network analysis throughout this book.

The collaborative is a third form of network. It is critically important to note at this juncture that collaboration is, unto itself, a value-neutral construct. Collaboration is not inherently good, nor always effective. We must continually ask the question of collaboration toward what ends? Cautioning against viewing collaboration as a panacea for solving complex public problems, Eugene Bardach suggests that we should "not want to oversell the benefits of interagency collaboration. The political struggle to develop collaborative capacity can be time consuming and divisive. But even if no such struggle were to ensue, the benefits of collaboration are necessarily limited" (Bardach, 1998, p. 311; Bardach, 2016). He concludes that,

We should not be impressed by the idea of collaboration per se. That collaboration is nicer sounding than indifference, conflict, or competition is beside the point. So, too, is the fact that collaboration often makes people feel better than conflict or competition. I do not want to oversell the benefits of interagency collaboration. The political struggle to develop collaborative capacity can be time consuming and

divisive. But even if no such struggle were to ensue, the benefits of collaboration are necessarily limited.

(Bardach, 1998, p. 311)

We must be able to take into account that collaborations may be an ineffective means for delivering socially desirable outcomes. Collaboratives can be undertaken in closed networks, leading in their worst cases to “group think” or collusion. The social capital derived through horizontal ties may support “dark networks” (Raab and Milward, 2003), found in the cases of organized crime and terrorist cells that exist to do social harm.

We also need to be able to take into account collaborations that are carried out without sufficient democratic anchorage (Sorensen and Torfing, 2005). Collaboration without democratic anchorage may yield more efficient results, but may also lack less publicly legitimate results, leading us to conclude that we need to develop the means to ascertain the degree of democratic anchorage that exists within any given governance network.

By allowing for the possibility that networks can take on characteristics of some combination of market, hierarchical, and collaborative arrangements, we can begin to recognize the trade-offs and opportunities that occur when one form of administrative authority is compared to, contrasted against, and combined with one another. If for-profit firms participate in an interorganizational network, they bring to the network facets of the market structures to which they belong. Their engagement in public-private partnerships, regulatory subsystems, or grants and contract agreements is carried out with one proverbial eye over their shoulder,

Table 2.2 Macro-Level Network Forms

	<i>Market</i>	<i>Hierarchy</i>	<i>Collaborative</i>
Relational tie	Competitive	Command and control	Collaborative and cooperative
Public administration paradigm	New public management	Classical public administration	Collaborative public management
Institutional frame	Businesses/ corporations	Public bureaucracy	Partnerships; coalitions

Source: Modified from Powell, *Research in Organizational Behaviour*, 12, 295–336, 1990; Grimshaw et al., in Marchington et al., Eds., *Fragmenting Work: Blurring Organizational Boundaries and Disordering Hierarchies*, Oxford: Oxford University Press, 2005.

judging their participation, in part, on the impacts that their involvements have on fostering their own competitive advantage. The potential impact that network-level actions have on the participating firm's economic standing is often an important consideration guiding network behaviors.

If public sector organizations such as government agencies formally participate in a governance network, they bring with them elements of their bureaucratic, hierarchical structure. Official public agency participation is often predicated on the will and desires of the agencies' principals, be they the elected chief executive officers, their appointees, or supervisors imbued with the authority to dictate the agencies' scope and type of involvement. *Those who distinguish governance networks from markets and hierarchies fail to take into account the influence that the market and hierarchical structures of the participating organizations and institutions have in the structures and functions of the network itself.* At the meso and micro levels, these mixed ties surface as distinctions between vertical, horizontal, and competitive ties, a matter we turn to in great depth in Chapter 4.

In this book we classify the types of network structures and characteristics found across the literature in terms of a nested configuration of levels of analysis. Looking across this literature, we find some frameworks focusing exclusively on the whole network as the unit of analysis (O'Toole, 1990; Rhodes, 1997; Schaap and van Twist, 1997; Milward and Provan, 2006; Frederickson and Frederickson, 2006; Agranoff, 2007; Provan and Kenis, 2008; Provan, Fish, and Sydow, 2007), while others combine individual member characteristics *and* whole networks (Agranoff and McGuire, 2003; Mandell and Steelman, 2003) into their frameworks. At the core of this nested configuration are the characteristics of the particular network actors or nodes, and the orientations they bring to their networked activities. At this level we can consider and empirically observe actors' goals, motivations, interests, and ultimately, the resources they bring to a network. At another level of analysis are the ties that exist between network actors or nodes, described in terms of the strength, formality, and vector of relational ties that get established between any two social actors or nodes. With the characteristics of the individual actors and the ties forged between them defined, we may move to considerations of network-wide characteristics. At this level, we characterize network structures in terms of the degree of openness and closeness that governance networks may have, the relative stability and formality of governance networks, and the network-wide policy and operation functions undertaken. At the broadest level of consideration are systems-wide considerations that view governance networks as being embedded in systems dynamics that include the external environment, input/output flows, and feedback loops.

The definition of governance networks that we use here is premised on the notion of markets, hierarchies, and collaboratives as types of interorganizational network structures that influence the kinds of administrative authorities, accountability regimes, and performance standards employed. *Governance*

networks are defined as relatively stable patterns of coordinated action and resource exchanges; involving policy actors crossing different social scales, drawn from the public, private, or nonprofit sectors and across geographic levels; who interact through a variety of competitive, command and control, cooperative, and negotiated arrangements; for purposes anchored in one or more facets of the policy stream. We also add that governance networks are found within specific policy domains (such as health, environment, transportation, education, etc.) as well as exist across policy domains.

The mixed-form governance networks that we describe in this book are characterized as variations of some combination of actors, ties, and network-wide and systems characteristics. Over the course of the next few chapters we discuss each of these variations. We offer some suggestions for ways in which each variation may be labeled or categorized. The selection of these variations has been grounded in the literature review outlined earlier in this chapter. A scan of the major developments in governance network analysis provides some reference to additional typologies and frameworks that have populated the literature.

Notes

- 1 (1999, p. 234).
- 2 With the obvious exception of intergovernmental networks, which may be described as networks of governments of different geographical scope.
- 3 With the obvious exception of intergovernmental networks, which are relegated to networks of public sector organizations.

Chapter 3

The Actors within Governance Networks

All the world's a stage, and all the men and women merely players.
They have their exits and their entrances and one man in his time plays
many parts.

—William Shakespeare¹

In this chapter we address the characteristics of the range of possible “nodes” that populate a governance network. These nodes are described as social actors or agents who possess certain goals, capacities, and resources, and take on certain roles within a governance network. We discuss how an actor’s sector characteristics (public, private, or nonprofit) impact the actor’s goal and role orientations. We also set the stage for a deeper discussion of sector governance and the range of accountability frameworks and performance expectations found within each sector. We then acknowledge that network actors will be attuned toward certain levels of geographic scale: local, regional, statewide (in a U.S. context), national, and international. We then broach a subject that has been given scant attention within the network literature in public administration and policy studies, namely, the social scale of participating actors. In the previous chapter we touched on the roles that citizens and public administrators play in certain kinds of collaborative or participatory governance structures. These concerns raise the topic of the social scale of a network actor. We view social scale as a hierarchically nested concept that includes individuals, groups, organizations, and networks of organizations and argue that discerning the level of social scale is critical to describing and analyzing actor characteristics. We then explore the relationship of an actor within a network in terms of the metaphor of “center and periphery.” Lastly, in anticipation of describing network ties in terms of resource exchange

theory, we lay out the range of possible resources that specific network actors may bring to their involvement and describe these resources in terms of nine different distinctions of “capital resources.”

Goal and Role Orientation of Network Actors

The importance of goal setting and attainment has long been recognized as a central feature of organizational behavior and leadership development (Etzioni, 1964; Hall, 1980). Amitai Etzioni first observed that “an organizational goal is a desired state of affairs which the organization attempts to realize” (1964, p. 6). However, such a “desired state of affairs is by definition many things to many people” (Hall, 1980, p. 88). Thus, we may conclude that goals, be they set at the individual, group, or organizational level, are essentially aspirational statements shaped by values and beliefs of needs, solutions, performance, and capacity. Goals carry meaning because they project a desired state of being, and must, ultimately, be converted to specific guides for action on an operational, and essentially practical, level.

Focusing particularly on the nature of “complex” organizational goals, Charles Perrow first distinguished between “official” and “operative” organizational goals. Official, strategic level goals are “the general purposes of the organization as put forth in the charter, annual reports, public statements by key executives and other authoritative pronouncements” (1961, p. 855). Official goals are often reified, appearing as written standards or explicit pronouncements. Reification means “to treat [an abstraction] as substantially existing, or as a concrete material object” (Wenger, 1998, p. 58). Official strategic level goals are “constraining or guiding principles” from which rules, policies, procedures, and habits emerge (Hall, 1980, p. 90). We may relate official goals with Argyris and Schon’s concept of organizational “theories of action” (1995).

Operative goals, on the other hand, “designate the ends sought through the actual operating policies of the organization; they tell us what the organization actually is trying to do, regardless of what the official goals say are aims” (Hall, 1980, pp. 89–90). Operative goals are produced through participation, engagement, and practices of organizational actors. Operational goals serve as “theories in action” (Argyris and Schon, 1995). According to Hall, operative goals are produced through a combination of official goals and other internal and external factors (1980). He views operational goals at the level of the rules, policies, procedures, and habits that emerge out of actual experience.

As we consider the particular goals of different network actors and how these goals contribute to the wider network, we recognize the differences between official strategic level goals and those that actually guide the operations of nodal actors. Case studies of governance networks often highlight the disparities that

exist between an organization's official positions and those that exist "in use" (Koontz et al., 2004; Frederickson and Frederickson, 2006; Rodriguez et al., 2007; Koliba, Mills and Zia, 2011; Mills and Koliba, 2014). A pattern that may sometimes emerge in interorganizational governance networks is the difference between the official and formal positions held by organizations and institutions, and the unofficial and informal positions taken up by their respective individual representatives. We may also find that individual actors in a network may state that they do not "officially represent the interests" of their organization. In some cases, official participation may even be prohibited by law or statute, as in the cases when legislatures or executives limit governments' roles in network activities.

The roles that particular network actors take will, in large part, be predicated on the depth and breadth of capital resources each brings to the network. We will note in the section to follow that resource exchanges between network actors are likely to be rarely equal. Lead organizations supplying the bulk of a governance network's financial resources and network staffing are common. Arguably, those contributing the most, or at least the most valuable, capital resources to a network will be in a better position to wield some measure of authority over other network actors. Being resource rich often positions network actors as the "principals" in a principal-agent dynamic (Moe, 1984; Eisenhardt, 1989). Resource-poor network actors will more likely be positioned as network "agents," often giving authority to those who bring more resources to the table. When two or more actors enter into a network relationship as "co-equals" we may assume one of two things: (1) Either there exists a sufficient balance in the distribution of resources, meaning network actors bring equal amounts of resources to the network, or (2) gaps between resource distributions do not matter to network members and that other sources of pooled power sharing are evident. The latter case may arise when resource-rich actors voluntarily forgo the latent and manifest powers that may be tied to their resources. We elaborate further on the relationship between resource distribution and the administrative authority of specific social ties in Chapter 4.

Individual network actor goals are further complicated by the multiple roles that they may take on within a network. These roles may be tied to the resources that a network actor brings to the network, such as taking on the role of funder (financial), expert (knowledge and human), or boundary spanner (social).

Across the literature, particular attention has been paid to the roles that governments take on in governance networks. In describing the kind of roles that governments take on in public-private partnerships, regulatory subsystems, and grant and contract agreements, Koontz et al. (2004) describe governments as leaders, followers, and encouragers within networks. Donald Kertl (2006) has discussed the ways in which governments play the role of "boundary spanner." Lester Salamon (2002b) describes the orchestrating, modulating, and activating roles that government actors can and do play in governance networks.

After examining the ways in which governments can influence corporate social responsibility through a variety of regulatory and partnership initiatives, Tom Fox and his colleagues (2002) discuss how governments play mandating, endorsing, facilitating, and partnering roles. Nonprofits and for-profit firms involved in governance networks have the potential to take on many of these roles as well, particularly in the cases of advocacy coalitions and public-private partnerships.

Public, Nonprofit, and Private Sectors

Although we will look at sectoral differences as they relate specifically to governance, accountability, and performance measures in later chapters, we focus here on the distinctions between the goals of the public, private, and nonprofit sectors at the organizational scale. The model of public, private, and nonprofit social sectors is a widely adapted framework that draws distinctions between the public, private, and voluntary natures of these sectors. Extensive consideration has been given to the differences between the public and private spheres (Bozeman, 1987, 2007; Janoski, 1998; Bryson, Crosby, and Bloomberg, 2014).

Economically there are differences between public goods, private goods, and common pool resources (Ostrom, 1990; Daly and Farley, 2004) that are defined in terms of rival and nonrival good, while a “third rail” is equally widely recognized in the considerable recognition that the role of voluntary association and “civil society” has played in endowing democracies with citizen engagement and within the delivery of social welfare services and other important outcomes generated from the social capital of voluntary associations. Respecting that a strong case could be made for characterizing civil society as the voluntary sector, we opt to use the term *nonprofit organizations* to represent the range of “voluntary associations” first recognized by Alexis de Tocqueville more than 178 years ago (2003).

A simple three social sector model is displayed in Figure 3.1. Public sector organizations are the formal institutions of the state, spanning the legislative,

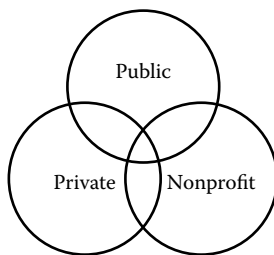


Figure 3.1 Three Social Sectors Model.

executive, and judicial branches of government. As sovereign entities, these institutions have a contractual obligation to serve the interests of their citizenry. The governmental institutions of the state are guided by public interests and public policy goals. Private sector organizations are driven by market forces and the pursuit of profit as the dominant performance measure. Businesses, corporations, firms, and other labels ascribed to for-profit organizations make up the private sector. Property rights and ownership play a critical role in defining corporate governing structures. The nonprofit sector is comprised of voluntary associations that are prohibited from earning profits. Nonprofit organizations are driven by social missions designed to represent interests, advocate positions, inform the public, or deliver social services. Table 3.1 provides a summary of some basic social sector characteristics.

The dominant, neo-classical economic view of the official goals of private sector is profit maximization. As is the case with most performance measures, profit can be measured and valued in different ways. “The readily quantifiable profit goal is not such a simple matter. . . .” writes Hall. It is confounded by such issues as the time perspective (long-run or short-run profits); the rate of profit (in terms of return to investors); the important issue of survival and growth in a turbulent and unpredictable environment that might in the short run preclude profit making (Hall, 1980, p. 88). Increasingly, some private sector actors have considered other “socially responsible” goals, such as the “triple bottom line” and related “profit plus” aspirational goals. Despite these important caveats, private firms exist to provide goods and services that customers and consumers need and want at a profit. As actors guided by market forces, the profit goal drives competitive efforts to wield authority and join networks that lie in a firm’s, business’s, or corporation’s best interests.

The official goals of public sector organizations are wrought with much more ambiguity (Stone, 2002). It is now commonly observed that policy goals get framed differently by different policy actors, interest groups, citizens, etc.

In Deborah Stone’s (2002) book *Policy Paradox*, she describes how goal ambiguity serves as an essential feature of the public policy-making process. The role of ambiguity in framing public policy goals obviously brings a certain measure of uncertainty to the participation of a public sector organization (or public official) in a governance network. According to Stone, policy ambiguity provides sufficient political cover for some policy makers to reach agreements on courses of action (new laws, regulations, resources, etc.). Even when the goals of public policy are clearly specified in laws and regulations, those charged with enforcing, enacting, and implementing them have discretion, feeding into an ambiguity regarding the fidelity to which a constituted policy is rightfully enacted. In this context, ambiguity can lie at the intersection of politics and administration, long recognized in debates regarding the “politics/administrative dichotomy” in public administration (Goodnow, 2004).

Hall observes that “if. . . [a public sector organization] is staffed by personnel who have values above and beyond simply administering the existing laws . . . their own values toward social action or inaction can clearly modify the stated goals of the organization” (Hall, 1980, p. 88). In instances where laws, regulations, and policy directives are clear and those responsible for enforcing, enacting, or implementing them understand and comply with the original intent behind them, we may find some measure of alignment between official public sector goals and their operative goals.

However, in cases where certain internal and external factors bring ambiguity to public policy goals, we find these goals the subject of dynamics found in the broadly defined and complex “polis,” and the continuous negotiation of authority between policy actors that is said to exist within the polis (Stone, 2002).

Table 3.1 defines the core characteristics of the three social sectors. The table includes the type of organizational actor, the labels we ascribe to individual actors within those organizations, the performance goal(s) of the sector, and the ways in which the sector is held accountable. This latter dimension speaks to the differences in the governance of these organizations.

The official goals of nonprofit sector actors are shaped in large part by the mission of the organizations and the interpretation of these missions by nonprofit managers and their boards of directors (Stone and Ostrower, 2007). Both the official and the operative goals of nonprofit actors may be influenced by external funders who articulate their own funding priorities and, indirectly, influence how nonprofit actors officially define their missions or operate on a day-to-day basis. Nonprofit organizations are generally founded to serve a social or public need. As conduits through which collective interests may coalesce, the nonprofit sector’s goals are also shaped through a process of “negotiated meaning” between those sharing these common interests. We argue that nonprofit actors are the most susceptible to being influenced by the goals of other members of the governance network, resulting, in the worst cases, in unwanted “mission creep.” In the best cases, nonprofit actors are, overall, in the best position to adapt to changing conditions and respond to emergent needs, new priorities, and altered conditions. Nonprofit organizations do wield significant power as representatives of certain collective interests. Nonprofit organizations are often used to exert influence over the political system. In cases like these, nonprofit governance structures allow for special interests to collectivize their power and operate from a significant position of strength (Lowi, 1969; Janoski, 1998; Couto and Guthrie, 1999).

A review of the differences in the performance standards across the public, private, and nonprofit sectors allows us to draw a continuum of clearly defined measures: nearly universal measures (such as profit), to the ambiguity-riddled challenges of measuring successful public policy goals (Stone, 2002), to the highly context-specific and mostly localized performance standards ascribed to

Table 3.1 Characteristics of Social Sectors

<i>Characteristics Unique to the Sector</i>	<i>Private Sector</i>	<i>Public Sector</i>	<i>Nonprofit Sector</i>
Organizational actors	For-profit firms, businesses, and corporations	National, state, regional, and local level governments (including legislative, judicial, and executive branches)	Nonprofit organizations; nongovernmental organizations (NGOs); informal community groups
Individual actors	Business managers; owners; consumers	Public managers; elected officials; citizens; judges	Nonprofit managers; citizens; clients
Official goal Predominant performance standard(s)	Profit	Making and enforcing laws and regulations; meeting public needs; delivering public policy	Fulfilling mission
Overarching goals determined by those to whom accountabilities are rendered	Board of directors; shareholders/owners; business managers	Elected officials; citizens; public managers	Board of directors; clientele/interests

Source: Modified from Block, in Ott, Ed., *The Nature of the Nonprofit Sector*, Westview Press, Boulder, CO, 2001, pp. 97–111.

individual nonprofit organizations (Stone and Ostrower, 2007). Although there is some literature that has discussed the differences between social sectors, and how these differences impact contractual agreements and public-private partnerships (Gazley and Brudney, 2007; Van Slyke, 2006), a full accounting of intersector dynamics is largely missing from the literature reviewed here. The challenges associated with “principal-agent problems” get compounded when private contractors are viewed as interest groups capable of capturing contractual

and regulatory authorities. These considerations lead us to conclude that we need to evolve our capacities to evaluate multisector arrangements and that building such a capacity needs to be a central element of governance network analysis.

At this juncture, very little is known about how the different governance and administrative structures of the public, private, and nonprofit sectors inform the governance of an entire governance network. The role that sector blurring plays in governance networks has been extensively discussed in Koppell's analysis of "hybrid organizations" (2003). Koppell defines the hybrid organization as entities, "created by the [U.S.] federal government (either by act of Congress or executive action) to address a specific public policy purpose. It is owned in whole or part by private individuals or corporations and/or generates revenue to cover its operating costs" (2003, p. 12). Hybrid organizations are embodied in many (but not all) government corporations, authorities, and some commission structures. Koppell reviews how certain hybrid organizations in the housing and mortgage, export promotion, and international development industries are held accountable through various forms of bureaucratic control. However, his study of hybrid organizations is largely relegated to describing how bureaucratic control is exerted over the hybrid organization. Although he richly describes how and to what extent there exists a set of apparent trade-offs between public missions and private funding, his conceptual model for analyzing these dynamics stays focused on the examination of principal-agent relations guided by certain assumptions regarding the centrality of state sovereignty.

In later chapters, we discuss the role that social sector characteristics play in crafting network-wide accountability regimes. We suggest that the study of accountability across complex cross-sector arrangements needs to be understood as a series of trade-offs between the democratic anchorage of the state (and sometimes collective interest groups), market accountabilities (when private firms and corporations are implicated), and administrative accountabilities (introduced below in terms of the vertical or horizontal nature of administrative authorities).

Geographic Scale

Governance network actors pursue their goals at multiple geographic scales, which in turn are typically driven by the spatially defined or spatially constrained organizational goals and objectives. We suggest the need to differentiate among actors based on the geographic scale of their primary organizational affiliations. While geographic scale can be represented as a continuous function, here, for simplicity, we break down the discussion of geographic scale in discrete terms that corroborate with typical political-administrative boundaries. We enunciate

this as the spatial boundedness of network actors and break it down into four concrete spatial scopes: local, regional, national, and international.

Local scale: Public sector actors operating in local (e.g., county or municipal) governments typically focus their system of concern at the local level. Though the dynamics at larger spatial scales may constrain the actions of local public sector actors, the actors at the local scale are typically the ultimate implementers, or what Lipsky (2004) calls “street level bureaucrats.” Local actors thus operate in action arenas (Ostrom, 2007). Similarly, small nonprofits or community organizations and small businesses typically operate at local levels. The politics and social dynamics of local level actors are much more interpersonal than the politics at larger spatial scales. We can also argue that governance networks at local levels provide very interesting empirical test beds for modeling governance network responses, as system complexity increases at larger geographical scales.

Regional scale: Network actors operating at regional, statewide, or multistate geographical levels (in the U.S. context) can be grouped as regional/state level actors. These include representatives of metropolitan or state governments in public sector organizations. Nonprofits are typically larger at this scale than the local level nonprofits, and so are the private sector organizations, which are typically LLCs or small corporations (in the U.S. context). A lot of public policy implementation, including transportation, health, education, economic development, and so on, occurs at the regional scale. The system complexity at this scale is higher than that at the local scale, primarily because both the sheer number of network actors and their goal conflicts are higher at the regional scale than the local scale.

National/Federal scale: Various nation-states have different levels of centralized (federal) vs. decentralized (confederal) powers to raise taxes/revenues, legislate policies, and implement some of them (especially defense, foreign affairs, and national security). In modern democracies, policy-making legislatures are elected periodically through population-based or area-based representational systems. Large national level nonprofits and think tanks influence national level policy-making processes, as do large, even multinational level, corporations when they lobby national level policy makers. National level network actors in all sectors have typically larger geographical domains of concern than regional or local level network actors; however, democratic accountability and representative politics may press national level policy actors to pursue respective regional or local level interests in the resource allocation done at the national level, such as budget-making processes and so on.

International scale: Network actors operating at international scales include members of international public sector organizations, such as United Nations agencies; international nongovernmental organizations (NGOs), such as International Union for the Conservation of Nature (IUCN) and World Wildlife Fund (WWF); and multinational corporations, such as automobile and oil companies. Network actors operating at the international scale typically deal with cross-national resource extraction or resource allocation issues. Due to the lack of a stable international government, network actors at the international scale operate with very different rules of the game than typically observed at the national, regional, or local levels.

Within each of these three social sectors, organizations operate across varying levels of geographic scale. In Chapter 6, we examine how different levels of governments may nest inside of one another or coexist as a complex network of intergovernmental entities. Corporations, businesses, and firms get shaped by the geographic scale of their operations and ownership patterns, ranging from multinational corporations to small local businesses, while nonprofit organizations will likely tailor their missions around attending to a particular geographic scale: from the international aid agency to a local food bank. For our purposes, we draw distinctions between the local, state/regional, national, and international levels. Table 3.2 breaks down how social sectors and geographic scales converge within a particular organizational or institutional actor. Also see Figures A1, B1, and C1 at the end of this chapter for visualizations of governance network actors spanning sectors and scales.

Social Scale

In social networks, nodes may represent very different kinds of *social scale*, ranging from individual people to small groups of people (individual teams, committees, departments, offices, etc.), to entire organizations. In dealing with complex social networks, the matter of *social scale* is a preeminent consideration (Dodder and Sussman, 2002). This is particularly true if the social system is comprised of more than individuals, extending into the small group and organizational levels. Although multiscale network modeling is beginning to be devised, at this current time, most network analysis within the public administration and policy studies literature has been rendered by observing the relationship between nodes of a comparable social scale.

Some empirical studies of governance networks have focused exclusively on the “whole” network as the unit of analysis (O’Toole, 1990; Rhodes, 1997; Schaap and van Twist, 1997; Milward and Provan, 2006; Frederickson and

Table 3.2 Range of Governance Network Actors (U.S. Context) by Scale and Sector

	<i>Social Sector</i>		
<i>Geographic Scale</i>	<i>Private Sector</i>	<i>Public Sector</i>	<i>Nonprofit Sector</i>
International	Multinational corporations	United Nations; international regulatory entities	International nongovernmental organizations
National	Corporations	Federal government (legislative, executive, judicial)	National nonprofit organizations
State	Corporations/ businesses	State government (legislative, executive, judicial)	Statewide nonprofit organizations
Regional	Regional businesses	Regional government	Regional nonprofit organizations
Local	Local businesses	Local government (legislative, executive, judicial)	Local nonprofit organizations; community groups

Frederickson, 2006; Agranoff, 2007; Provan and Kenis, 2008; Provan, Fish, and Sydow, 2007), while others combine individual member characteristics and whole networks (Agranoff and McGuire, 2003; Mandell and Steelman, 2003; Koppenjan and Klijn, 2004; Koontz et al., 2004; Nowell and Steelman, 2014) into their frameworks.

Systems theorists have recognized the “nested complexity” of social networks (Dodder and Sussman, 2002). Sociologically, the matter of social scale has been framed as a distinction between macro, meso, and micro levels of analysis (Collins, 1988). Figure 3.2 provides a visual representation of the ways in which nodes of a smaller social scale (individual) may be understood as nesting within larger scales (organizational).

The nested complexity of many social networks can be recognized in some of the classical considerations of organizational leadership, and the extent to which

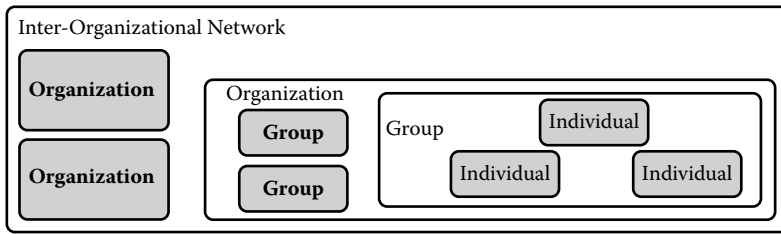


Figure 3.2 The Nested Complexity of Social Networks.

individual leaders can influence the dynamics of an organization. Guiding much of this literature is the assumption that individual leadership can and does impact the operations of organizations. Likewise, it has been widely noted how organizations socialize individual members, suggesting ways in which a person’s membership in an organization socializes him or her and, ultimately, shapes his or her professional identity (Wenger, 1998). The relationship between the individual person and the wider organizational context is an enduring theme within public administration, as evidenced in this quote by Paul Appleby:

[Government] is a system, and the system cannot be understood except in terms of the public employees themselves, their conceptions of their positions, and the attitudes of the public about what is required in and from our civil servants. These elements together are what make government a system, for in combination they comprise what we call a bureaucracy.

(Appleby, 2004, p. 132)

The conclusion that we may draw from this observation is that governance networks, as social networks, are multiscaleable, with the nodes of a social network defined in terms of individual persons, groups of people, or organizations.

Nodes as Organizations and Institutions

As “corporate” bodies, organizations “maintain a recognizable form and activity over long periods of time, even though their constituent parts exist on time scales that are orders of magnitude less long lived . . .” (Miller and Page, 2007, p. 7). This capacity of organizations and institutions to “outlive” any one person who participates in its operation at any given time allows a Coca Cola, Ford Motor Company, the University of Vermont, or the U.S. Federal Government to persist over generations of workers.

The extensive bodies of literature that focus on the study, description, and evaluation of organizations and institutions across the public, private, and

nonprofit sectors are relevant to the development of any meta-level theory of governance networks. Although the principles of holism (Degenne and Forse, 1999; Provan, Fish, and Sydow, 2007) are extremely relevant to the study of interorganizational networks, the extensive body of literature drawn from institutionalism, neoinstitutionalism, and new institutionalism (Peters, 2005), as well as the organizational development literature found across many social science disciplines, are relevant resources in the development of an integrated theory of governance networks.

Institutional theory views institutions as forms of organization that are shaped by some combination of formal, explicit structures and implicit norms and routines (Peters, 2005). Institutionalism “takes as a given the political and social institutions of a society and then attempts to determine whether those institutions have any impact on the behavior of their members” (Peters, 2005, p. 99). These approaches to institutional structures have been applied to institutional arrangements between two or more organizations. Although we believe that the theory of governance networks put forth in this book is highly compatible with institutionalism, we recognize the difference between institutions as organizations and institutional arrangements as the formal and informal standards, norms, and routines that guide any interaction between multiple social actors. Arrangements may be said to be “institutionalized” when they have achieved a certain level of stability, with routines leading to the sedimentation of certain structures and functions (Peters, 2005). Institutionalism also brings the notion of isomorphism into the picture. The isomorphic properties of one institution may be copied by other institutions (DiMaggio and Powell, 1983). The development of parallel structures and functions between two or more organizations can, in certain instances, facilitate the flow of resources between two network actors, regardless of their social scale.

Nodes as Groups of Individuals/Communities of Practice

Case studies of governance networks often highlight the roles that groups of individuals play in the administration and governance of interorganizational networks. These group-level configurations have been described as taking the forms of committees, task forces, advisory groups, and teams operating within governance networks. Small groups may take on formal roles and responsibilities within the network, operating as central coordinating mechanisms designed to steer the governance network. Rhodes’s social exchange theory discusses group configurations as “dominant coalitions” operating within the broader network (1997). Sabatier’s Advocacy Coalition Framework (ACF) refers to these small groups as “advocacy coalitions” (Sabatier and Jenkins-Smith, 1993), while Ostrom’s IAD framework posits that groups of individuals coalesce

in “action arenas” (Ostrom, 1990, 2005). Historically, the loci of power found in iron triangles were often described as formal and informal conferences, panels, and committee meetings. In some instances, as in cases in which committees, authorities, and task forces are given resources to create, maintain, or govern broader interorganizational networks, groups turn into formal network administrative organizations (NAOs) (Provan and Kenis, 2008), shaping how governance networks are led and, ultimately, governed.

The importance of group structures and functions to the operation of the wider network has been recognized across many of the case studies of network configurations in the literature (Wenger, 1998; Koontz et al., 2004; Agranoff, 2007, 2008; Keast et al., 2004; Clifton et al., 2010). Some have isolated these groups for study, drawing implications for network-wide performance in fields such as health care (Rodriguez et al., 2007), education (Gajda and Koliba, 2007), and transportation (Wolf and Farquhar, 2005; Zia, Koliba, Meek and Schultz, 2015). Oftentimes these groups, committees, task forces, commissions, and authorities serve as the nerve center for network-wide operations, providing the physical and virtual spaces for interpersonal coordinated actions and resource exchanges to occur. Groups coalescing around specific practices are described as “communities of practice” (Wenger, 1998; Snyder, Wenger, and de Sousa Briggs, 2003; Goldsmith and Eggers, 2004; Agranoff, 2008; Koliba and Gajda, 2009), capable of spanning organizational boundaries, facilitating the alignment of practices, and coordinating action pertaining to network-wide objectives. Figure 3.3 displays how communities of practice may relate to one another when individual members bridge between two (or more) communities of practice.

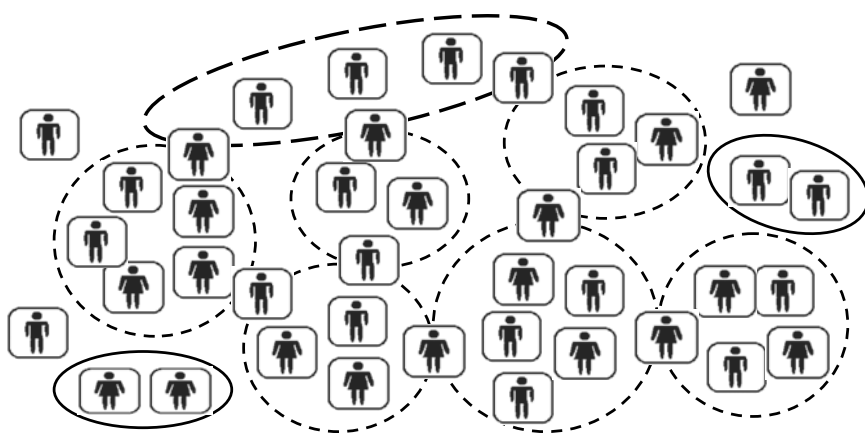


Figure 3.3 Communities of Practice.

Source: Gajda and Koliba, *American Journal of Evaluation*, 28, 26–44, 2007.

Snyder, Wenger, and de Sousa Briggs (2003) define communities of practice as

groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis. They operate as “social learning systems” where practitioners connect to solve problems, share ideas, set standards, build tools, and develop relationships with peers and stakeholders.

(2003, p. 17)

It is believed “that communities of practice are valuable . . . because they contribute to the development of social capital, which in turn is a necessary condition for knowledge creation, sharing, and use” (Lesser and Prusak, 2000b, p. 124). The value of looking at the community of practice as a specific subnetwork within a larger whole governance network lies in the capacities of communities of practice to transcend formal organizational boundaries. As spaces where knowledge is transferred and decisions are made, and learning is achieved, communities of practice serve as critical features of interorganizational networks.

Nodes as Individual People

It is hard to contradict the assertion that networks are both governed by and through the cumulative efforts of a core group of individuals, the decisions they make, the tasks they take on, the trust and reciprocities they share, and the resources they bring to the effort. It has been widely assumed that the individual actors operating within governance networks (construed as network managers, network leaders, network partners, or collaborators), can play pivotal roles in the overall direction and performance of a network. However, isolating the impacts of individual actors *within* interorganizational governance networks is challenged by the sheer complexity of network structures and the wide range of multifaceted functions they take on.

The importance of individuals to the governing, management, and ultimate success and failure of governance networks may be recognized in the countless case studies written describing and evaluating interorganizational network functions. The importance of individual leaders has been recognized in discussions of critical skills (Salamon, 2002b; Agranoff and McGuire, 2003; Agranoff, 2007) and differences between participants as individuals or as representatives of participating organizations and institutions (Koontz et al., 2004).

Those responsible for managing within and across governance networks, be they construed as “collaborative” managers or “network” managers, are

particularly relevant to those looking to understand how governance networks operate and ultimately, we will argue, are democratically governed. Individuals also play important roles in the accountability structures of governance networks.

Brint Milward and Keith Provan (2006) and Robert Agranoff and Michael McGuire (2003), among many others, have recognized that as administrators *of* and *within* governance networks, public managers play a critical role in ensuring that democratic and administrative accountability exists within governance networks. It has been recognized that managing within networks brings a degree of complexity to administrative and managerial tasks. Mathur and Skelcher (2007), for instance, argue that network governance through public-private partnerships and government-nonprofit collaboratives is reshaping the role of public administrators from “neutrally-competent servants of political executive” to “responsively competent players in a polycentric system of governance” (p. 231). In other words, the role of individuals to steer whole networks is possible and in many instances, practical. We discuss the role that these network managers play in Chapter 8.

Spanning Social Scales

The relationship between the individual and the organization is complex. The capacity to sustain form and function distinguishes organizations and institutions from the individual people that comprise them. At the organizational level, individuals persist within a nested hierarchy, forming the basic “cells” or “organs” of larger corporate bodies. This propensity of individual human beings to join together to form corporate bodies that sustain themselves beyond the lifetimes of any one individual adds a level of complexity to social systems that needs to be accounted for. In complex biological systems, such as social insects, the life of the corporate hive or colony sustains itself beyond the lifetime of any one insect, oftentimes including the queen. In other words, there is precedence for the nested social structures of human organization found in other aspects of the biological world (Johnson, 2001).

Among those who have studied governance networks, several have recognized the relationship between the individual and organizational levels of network actors. Koontz et al. (2004) distinguish between governmental actors as the “flesh-and blood employees, elected officials, and other people in government who take action within the context of [the institutions they represent]” and governmental institutions themselves (p. 22). They conclude that individual “governmental actors and institutions, together or separately, constitute governmental roles in a particular collaborative effort” (Koontz et al., 2004, p. 22). Drawing on a series of case studies of environmental collaboratives in which governments play any number of roles (leading, following, facilitating,

SCALE FREE NETWORKS

The basic premise behind scale free networks is an assumption regarding the capacity of any one node to continue to add ties to other nodes in the network. Mathematically speaking, new nodes added to the network tend to demonstrate a preferential attachment to nodes with a greater number of existing links. Mathematician Albert-Laszlo Barabasi, who has done a great deal to popularize network analysis as well as serving as one of its preeminent scholars, describes preferential attachment as follows:

We assume that each new node connects to the existing nodes with two links. The probability that it will choose a given node is proportional to the number of links the chosen node has. That is, given the choice between two nodes, one with twice as many links as the other, it is twice as likely that the new node will connect to the more connected nodes.

(Barabasi, 2003, p. 86)

The picture of a scale free network that gets painted here is a visual structure of individual nodes (be they individual websites, cells, human beings, or organizations), clumping together to form clusters. These clusters, in turn, cluster with other clusters, and so on. We have already noted how the clustering of clusters forms the basis of certain kinds of hierarchical arrangements (Ravasz and Barabasi, 2003). We may view the scale free dimensions of social networks as being represented in the nested nature of individual people, grouping into small groups, which in turn form organizations, which in turn form interorganizational networks.

etc.), they observe the ways in which individual “governmental actors critically affect collaboration; in others, institutions may dominate; in yet others, both could be crucial; and in some cases, neither may make a substantial impact” (2004, p. 22). They also suggest that individuals and the organizations they populate and sustain exist interdependently, with each providing constraints on the other. They conclude that “governmental roles in a particular case may be quite complex, particularly if the [individual] actors are seeking to change institutions in ways that promote or constrain collaboration” (2004, pp. 22–23). The observations that they make regarding governmental actors and roles can likely be extended to private and nonprofit sector actors as well.

Center, Periphery, and Trajectories

The centrality of network nodes and the features of closeness and betweenness between nodes is a standard feature of most traditional network analysis (Wasserman and Faust, 1994; Provan, Fish, and Sydow, 2007). We may consider centrality in terms of a given node's place within the network using a center-periphery metaphor first introduced by Edward Shils (1975).

According to social exchange theory, the centrality of an actor has a bearing on the power that it possesses. In other words, "[s]tructure conditions the expression of human agency" (Worsham, Eisner, and Ringquist, 1997, p. 422), meaning, the location and trajectory of a given node (be it an individual, group, or organization) within a network matters. "Those who are centrally located have many alternatives and are not constrained by their actions by ties to a few organizations. The centrally located have access to resources such as information and are able to increase others' dependence on them" (Stevenson and Greenberg, 2000, p. 652).

It is important to note that the degree of centrality that a social node has in a network structure is not a proxy for determining the power of that node in the network. "Those who appear less powerful, such as the peripheral actors, may not be powerless. As agents, peripheral actors may be aware of the network and their position within it. They may exert influence by strategic uses of the network, use brokers who bring together parties to a transaction, or use more centrally located actors to mobilize support for their agenda" (Stevenson and Greenberg, 2000, p. 653). More peripherally situated network actors can leverage their place to affect an impact on network outputs and outcomes. Therefore, peripheral actors need not be perceived as possessing less power. Peripheral actors may possess resources that are central to network stability and success.

The centrality of any given social node within a network will likely change over time. Involvement may deepen or lessen. The movement of network actors has been described in terms of outbound and inbound trajectories (Wenger, 1998).

As dynamic, adaptable systems, governance networks get shaped by the trajectories of their members. Network actor trajectories may be viewed in terms of their inbound or outbound nature. Network actors with inbound trajectories are joining the network with the prospect of becoming fuller participants in its practice. Their identities are more invested in their future participation, even though their present participation may be peripheral, while other network actors will be on outbound trajectories leading out of a network. By introducing the notion of trajectories into governance network analysis, we account for the dynamics that the march of time brings to social networks (Kanwar et al., 2015). Trajectory also accounts for the development of emergent network properties, a topic that we touch on in Chapter 8.

The Stocks of Capital Resources Possessed by Actors

Network actors may be identified with and identified by the resources they bring to the network. Although governance networks often create resources that, in turn, support or aid in the collective undertaking of others in the network (as, for instance, a piece of public infrastructure that is constructed through a public-private partnership), we are discussing resources here as a characteristic that specific network actors bring into (or perhaps withhold from) a governance network.

Each member of a governance network, whether construed as existing at the organizational, group, or individual level, brings some measure of capital to its involvement. Network dynamics may be distilled down to the social ties that are formed between two nodes to exchange resources and engage in collective action. We have already noted how exchange theory underscores the capacity of two or more network actors to exchange resources. For instance, in grant and contract networks, a lead government agency may bring financial capital to the network. Contracted agents may bring some combination of human, knowledge, physical, social, and cultural capital to the relationship. In regulatory networks, lead government regulators may assert their political capital and legal powers to ensure compliance, requiring regulated entities to supply them with information (knowledge capital) about the regulated entities' practices. In advocacy networks, network actors may contribute virtually any form of capital to the collective endeavor. Likewise, in partnership networks some measure of risk sharing may be achieved as partners contribute a host of capitals, including financial, to a collective undertaking.

According to the basic tenets of social exchange theory, the range of resources that an actor "brings to the table" helps to determine its roles and functions within the network. The life of most governance networks involves the exchange of resources. The resource exchange, in turn, yields actions that generate outcomes.

Although there are many ways to categorize the kinds of resources that exist within any social systems, we will rely on a multidimensional model of resource "capitals" and do so by drawing on a modified version of Cornelia Flora et al.'s "Community Capital" framework (2005).

A resource is a "source of supply, support or aid, especially one held in reserve."

—Webster's Dictionary²

Capital is defined as “assets available for use in the production of further assets” (Wordnet, 2009). We use the term *capital* here to refer to the variety of assets that may be transferred between actors. The term *capital* is most often associated with wealth, and by inference, financial resources. However, over the last several decades social scientists have begun to widen the use of capital to encompass other supplies or stocks of resources. In addition to financial capital, we find allusions to physical, human, social, natural, political, cultural, and intellectual/knowledge capital across a broad swath of social science disciplines.

The equation of capital to wealth and the building of wealth is a common way of referring to capital. We divorce these two meanings, equating capital, instead, with a range of assets that may be traded or combined through network connections. Although some actors may engage in resource exchange and pooling to build wealth, other actors will likely be motivated by other ends, such as solving a public problem or delivering a public service.

Within a governance network framework, inputs into the system may be understood as stocks and flows of resources or capital. Financial, physical, human, social, natural, and knowledge capital may be used by individual network actors or by the network as a whole. Financial inputs into a governance network appear in funding streams, as inputs entering the network from external sources, or as the flow of financial resources within the network. Physical capital includes any equipment, built infrastructure, facilities, or other material possessions owned by individual network actors used on behalf of the network, or owned by the network on the whole. The human capital of individual networks’ actors, construed at the organizational, group, or individual level, provide the cognitive decision making and tasks that are critical to the functioning of the governance network. Social capital, what may be deemed as the by-product of ties between peers, partners, or co-equals, may be brought into a governance network by an individual network actor serving as a “boundary spanner” (Wenger, 1998; Kettl, 2006), linking social networks together. Social capital may be generated as an outcome within the governance network as well and be cycled back into the system as an input. Informational or knowledge capital not explicitly embodied within the expertise of particular network actors may be created, transferred, or shared across a governance network.

Table 3.3 offers definitions of these resources and lists some common ways that stocks of each particular capital can be described.

Financial Capital

Principles essential to the development and maintenance of financial capital have long been recognized as “leverage, financing, capital structure, appropriate levels of growth and spending, proper evaluation and accountability on spending projects” (Wattanasupachoke, 2009). Financial capital is the purchasing power

Table 3.3 Capital Resources Possessed and Exchanged by Network Actors

<i>Type of Capital Resource</i>	<i>Definition</i>	<i>Examples of Stock of Resources</i>
Financial	Any liquid medium or mechanism that represents wealth or other styles of capital. It is, however, usually purchasing power in the form of money available for the production or purchasing of goods.	Cash; securities; loans
Natural	"Stocks or funds provided by nature (biotic or abiotic) that yield a valuable flow into the future of either natural resources or natural services" (Daly and Farley, 2004, p. 437).	Watersheds; farmland; air; wildlife; recreation areas
Physical	"Productive, tangible assets such as production sites, machines, infrastructure and buildings" (Svendsen and Sorensen, 2007, p. 455).	Buildings; office space; equipment; property
Human	"The present discounted value of the additional productivity, over and above the product of unskilled labor, of people with skills and qualifications" (Rosen, 2008).	Skills; individual expertise; labor
Social	Egocentric: prestige or high status in a stratified social structure as a result of association, identification, alliance with, or appropriation by others (Swartz, 1990). Sociocentric: the accumulated trust, reciprocity, and durability built up between two or more actors that allows for the development of human knowledge (Coleman, 1986, 1988; Lesser and Prusak, 2000b) and political capital (Putnam, 2000).	Social ties forged through bonded, bridging, and linking ties; common norms forged as a result of social ties: trust and durability

Table 3.3 Capital Resources Possessed and Exchanged by Network Actors (continued)

Type of Capital Resource	Definition	Examples of Stock of Resources
Political	Representational: political power built on the premise of representation, representing the other’s interests. Reputational: political power based on one’s reputation (Lopez, 2002).	Favors; persuasive powers
Cultural	Social norms and traditions, evidenced in verbal facility, information about social institutions, and requirements for advancement in social class (Bourdieu, 1986); rituals, mythic lore, symbolic experiences (Swidler, 1986); skills, habits, styles adopted by a social group (Farkas, 1996, 2003).	Cultural values; habits; customs; rituals; artistic tradition
Intellectual/ Knowledge	“Intellectual material—knowledge, information, intellectual property” (Stewart, 1997, p. 7).	Information; knowledge

of the individual, group, or organization that owns it. Financial capital includes cash holdings of firms, governments, and nonprofits. Measurable indicators of financial capital include wealth and savings. Resource input in the market by individuals, shareholders, and organizations generates the capacity to buy and sell goods and services. Financial capital is also recorded in budgets and revenue streams, and accounts payable and receivables. In most instances, financial capital is viewed as a tangible, measurable capital. Grants and contracts are most likely structured to facilitate the exchange of financial capital for other forms of capital. We also see financial resource sharing in certain partnership networks as a pooled resource used to achieve shared goals, in regulatory networks in the form of permitting, sanctions, and fees, and in intergovernmental networks in the form of tax revenue transfers.

Physical Capital

Physical capital is manifested in the form of physical goods, either fixed capital or stocks and work in progress (Rosen, 2008). Physical capital is also referred to

as “built” capital (Mulder, Costanza, and Erickson, 2006). Physical capital takes the form of assets created through human agency, including physical infrastructure like roads, wastewater treatment facilities, electricity distribution networks, cultivated lands (for food, fiber, and fuel production), buildings, machines, and other tangible, observable, and quantitative assets (Svendsen and Sorensen, 2007, p. 455). Physical capital clearly exists as an observable and measurable asset. The purpose and benefits of physical capital are found in how it is used to generate income. Physical capital can be held in both individual and collective ownership.

Natural Capital

A taxonomy of natural capital has been posited by Foldvary (2006), who divides it into three categories: (1) space, (2) nonliving matter, and (3) biological natural resources. We represent this taxonomy below, recognizing that each of these categories is worth a deeper description. We refer the reader to Foldvary’s article.

Spatial land

1. Territorial space, that is, the surface-spatial soft-shell envelope at the earth’s surface in which life is located, including the space holding the waters
2. Spectral space, or the frequencies of the electromagnetic spectrum
3. Routes for satellites and other spacecraft

Material natural resources

1. Solid substances, such as minerals and coal, oil in solid substances such as shale and tar sands, and ice
2. Liquid substances, such as water and oil
3. Gaseous substances, such as air and natural gas, as well as properties of gas, such as the capacity to carry sound waves
4. Other states of matter, such as plasma

Biological natural resources

1. Living beings
2. The genetic base of life
3. The ecological relationships among living beings, including the habitat

A critical development around theories of natural capital is the idea of “ecosystem services” that contribute to the sustainability of life and the quality of life engendered within human civilization. Ecosystem services have been divided into supporting, regulating, provisioning, and cultural. Ecosystem services

ECOSYSTEM SERVICES

Supporting: Soil formation and nutrient cycling.

Regulating: Water/air purification and pest regulation.

Provisioning: Fuel wood, oil, sunlight, minerals, food, airspace for air travel, waterways.

Cultural: Aesthetic enrichment, quality of life, recreation, and enjoyment.

Source: Costanza et al. (1997). *Nature*, 387, 253–260.

are “ecosystem functions of value to humans” (Daly and Farley, 2004, p. 432; Costanza et al., 1997). The ecosystem services framework provides an ecologically based value of specific natural capital.

Human Capital

Human capital can be seen as those “abilities [of people] that are either innate or acquired” (Schultz, 1993) as well as expertise and “wisdom gained through experience” (Davenport, 1999, p. xi). Human capital includes both technical know-how, but also more widely the skills of the workforce. Human capital are the assets that individual people possess: “innate abilities, behaviors, personal energy, and time. These elements make up human capital, the currency people bring to invest in their jobs. Workers not organizations own this capital” (Davenport, 1999, p. 7). Human capital resides in the individuals who possess it. Economically, human capital is defined as “the present discounted value of the additional productivity, over and above the product of unskilled labor, of people with skills and qualifications” (Rosen, 2008). Human capital is defined by Thomas Davenport (1999) as the maximizing of knowledge, skills, talent, and behaviors of workers. He sees that maximization process happening through a variety of means, such as the workplace environment, an investment framework, education and training, increasing worker and employer value, and strengthening ties.

Social Capital

Social capital is formed in the bonds between actors. Bourdieu (1986, p. 248) first defined social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition . . . which provides each of its members with the backing of collectively-owned capital.”

TYPES OF SOCIAL CAPITAL

Bonding social capital: Characterized by strong bonds (or “social glue”), for example, among family members or among members of an ethnic group.

Bridging social capital: Characterized by weaker, less dense, but more crosscutting ties (“social oil”), for example, between business associates, acquaintances, friends from different ethnic groups, friends of friends, etc.

Linking social capital: Characterized by connections between those with different levels of power or social status, for example, links between the political elite and the general public, or between individuals from different classes.

Social capital has its roots in social exchange theory and the notion that social networks are formed through the aggregated behaviors of individuals and actor/environment relations. Eric Lesser (2000) writes of the differences in types of social capital, one being egocentric and based on the connections between individual actors; and the other being sociocentric and based primarily on measures in the capacity to access large amounts of information and relationships, such as a liaison between two departments, agencies, or organizations. Egocentric social capital is based on prestige and high status in a stratified social structure as a result of association, identification, alliance with, or appropriation by others. Sociocentric social capital is based in the communities of practice that emerge as groups share information and build networks that lend themselves to mobilizing assets.

Social capital has been linked to social and organizational learning (Lesser and Prusak, 2000a) and knowledge transfer, suggesting that sociocentric social capital is strongly tied to the development of knowledge capital. Social capital is also viewed as a key feature of civil society (Putnam, 1993, 2000).

Political Capital

Political capital is accumulation and selective use of influence and power. Political capital has been defined as “the sum of combining other types of capital for purposive political action or the return of an investment of political capital which is returned into the system of production (reinvestment)” (Casey, 2008, p. 7). Casey observes that “political capital is ill-defined, little understood, yet an important concept for understanding political exchange and relationships in the political arena” (Casey, 2008). It can be seen, it can be felt, yet no aspect can be touched.

This form of capital is collectively generated through representation and reputation, which can be held by one individual in power, by an effective leadership team, or an entire organization. Generally, it is the situation that determines how political capital is exchanged. Political capital can be structural, illustrating the linkage between political party, ideology, administrative authority, accountability, and leadership. It can be instrumental, for instance, pertaining to rights, access, and political connections. There are also distinctions made between representational and reputational political capitals. Representational political capital is built on the premise of representation, representing the other's interests. Reputational capital refers to political capital that is developed based on one's reputation. Each is important when trying to both sustain and develop political capital (Lopez, 2002).

Political capital is observed qualitatively by studying behaviors as indicated in public opinion or public policy support. One form of quantification of political capital can be seen through the use of political polls, campaign contributions, and election results. However, it is arguably one of the more abstract capital forms because of the role that social perceptions play. "Political capital refers to the individual powers to act politically that are generated through participation in interactive political processes linking civil society to the political system. As such, the term political capital refers to three factors related to local political actors' ability to engage in political decision making: the level of access that they have to decision-making processes (endowment); their capability to make a difference in these processes (empowerment); and their perception of themselves as political actors (political identity)" (Sorensen and Torfing, 2003, p. 613).

Cultural Capital

Cultural capital is defined as knowledge of social norms and traditions, evidenced in verbal facility, information about social institutions, and requirements for advancement in social class (Bourdieu, 1986); rituals, mythic lore, and symbolic experiences (Swidler, 1986); and the skills, habits, and styles adopted by a social group (Farkas, 1996, 2003). Pierre Bourdieu first coined the term *cultural capital*, introducing the concept to explain the role that cultural predilections play in determining the success of children in school. According to Weininger and Lareau, "Bourdieu broke sharply with traditional sociological conceptions of culture, which tended to view it primarily as a source of shared norms and values, or as a vehicle of collective expression. Instead, Bourdieu maintained that culture shares many of the properties that are characteristic of economic capital. In particular, he asserted that cultural 'habits and dispositions' comprise a *resource* capable of generating 'profits'; they are potentially subject to *monopolization* by individuals and groups; and, under appropriate conditions, they can be *transmitted* from one to another" (2007, p. 1).

We define cultural capital more broadly than Bourdieu. When considered at the organizational level, cultural capital takes the form of the norms, habits, customs, and other cultural characteristics ascribed to an organizational setting. The extensive attention paid to organizational culture is relevant here (Schein, 2010). The extent to which the cultural capital of one network actor negatively or positively impacts its roles and functions within the network is worth considering. We suggest that the cultural capital of a given network actor can be viewed qualitatively, as the embodiment of organizational values, norms, and customs. Although cultural capital is harder to exchange than most of the other forms of capital discussed here, we hold out the possibility that cultural capital can be exchanged between organizations—the cultural norms of one organization can be transferred or transmitted to other organizations.

Knowledge/Intellectual Capital

Knowledge capital is “the intellectual material—knowledge, information, intellectual property, experience—which may be resorted to in order to create wealth” (Stewart, 1997, p. 7). Knowledge or intellectual (these terms are often used interchangeably) capital is studied as a body of knowledge in the field of knowledge management, which focuses on the management and information technology systems in place to facilitate the transfer of knowledge. In summing up the value of knowledge capital to organizations and networks of organizations, Chatzkel observes:

Knowledge is not detached from the people, processes, or infrastructure of an organization and its network. It is part of all of these things and progressively a more pivotal part. The ability to mobilize knowledge resources has become even more critical than the ability to control and amass physical and financial resources.

(Chatzkel, 2003, p. 3)

According to March and Olsen, “knowledge is a scarce good, a strategic resource, and a normatively charged possession” (1995, p. 112). In writing about the value of knowledge to democratic institutions, March and Olsen describe it as “a foundation for political capabilities in most democratic politics (Crozier, Huntington, and Watanuki, 1975; Weber, 2013), but the value of specific knowledge depends on such things as changing political agenda, changing beliefs in political means, and changing competition from groups with alternative knowledge and experiences” (March and Olsen, 1995, p. 94).

The capital resources introduced in this chapter may be construed as characteristics of network nodes—something that actors bring to the network. The capital that each network actor brings to the network essentially serves as

an input into the system. Resource capitals can also be used to characterize the nature of the ties that bind two or more actors together, particularly ties built around some kind of exchanges of resources.

This chapter has focused on the characteristics of specific actors, agents, or nodes of a given governance network. We considered the sector, geographic scale, and social scale of the actor and we identified the types of resources or capital that these actors bring to a network. These characteristics set the context for the types of goals that each actor holds. Taking a bottom-up view of networks, we note that these goals, and the extent to which they align with other goals, help to set the direction of governance networks. The motivations of specific network actors matter.

In the next chapter, we take a deeper look at the types of ties that network actors forge as part of their engagement in governance networks. As we consider the ties between two or more network actors, we begin to build upon the notion that the “totality” of a network is “more than the sum of its parts.” In other words, the engagement of actors within a network allows for the exchange of resources and the comingling of goals.

Applications

Applications A, B, and C provide the reader with three studies that focused on the roles that specific actors play in the specific governance networks. Application A focuses on the actors implicated in the “Farm to School” movement in the United States. Application B focuses on the actors implicated in the deployment of new “smart grid” technologies. Application C focuses on the range of actors involved in the governance of a harbor in New Zealand. All three Applications highlight the different ways that governance networks may be visualized. Other visualizations of governance networks can be found in Applications D, E, F, G, I, M, N, Q, and R.

APPLICATION A: IDENTIFICATION OF ACTORS WITHIN FARM TO SCHOOL NETWORKS

Conner, D., King, B., Koliba, C., Trubek, A.,
and Kolodinsky, J. (2011). Mapping farm to school
networks: Implications for research and practice. *Journal
of Hunger & Environmental Nutrition*, 6, 133–152.

Abstract

In this study the “Farm to School” movement is described as a system comprised of discrete actors operating at varying levels of geographic scale, social sector, and network function. Drawing on a literature review and case study research, the authors present and analyze a farm to school network in Vermont as a series of relationships between network actors predicated on the flow of financial resources, whole and processed foods, information, and regulatory authority. After describing the range of network actors, the authors discuss the utility for using this map to critically examine the leverage points that may drive positive change within and across the system.

Methods

Single case study; source document analysis; interviews; stakeholder survey

This study takes a look at the role of networks in the implementation of “farm to school” networks that facilitate the flow of locally grown foods into the cafeterias of public elementary, middle, and secondary schools in the United States. The motivations for developing such arrangements include the funneling of local dollars to local agricultural economies, as well as helping students deepen their understanding and appreciation of where their food comes from. Farm to school initiatives also seek to improve the nutritional intake of students. This study conducted by Conner et al. (2011) uses a governance network analysis framework to identify the range of network actors that are involved in bringing local foods into public schools in the United States.

Figure A.1, below, presents a visualization of network actors arranged as levels of spatial or jurisdiction scale. Beginning at the “home” level, moving up in scale from the school to district, community, state, and national scales, the core actors are identified by Conner et al. in gray scale. These key network actors include local farmers, students, and schools. Within schools further network actors are differentiated (staff and food service directors). Teachers and parents round out this core.

Conner et al.’s case study highlights the role that other actors play in this network, particularly the influence of district, state, and federal actors in providing financial assistance and political power through regulation.

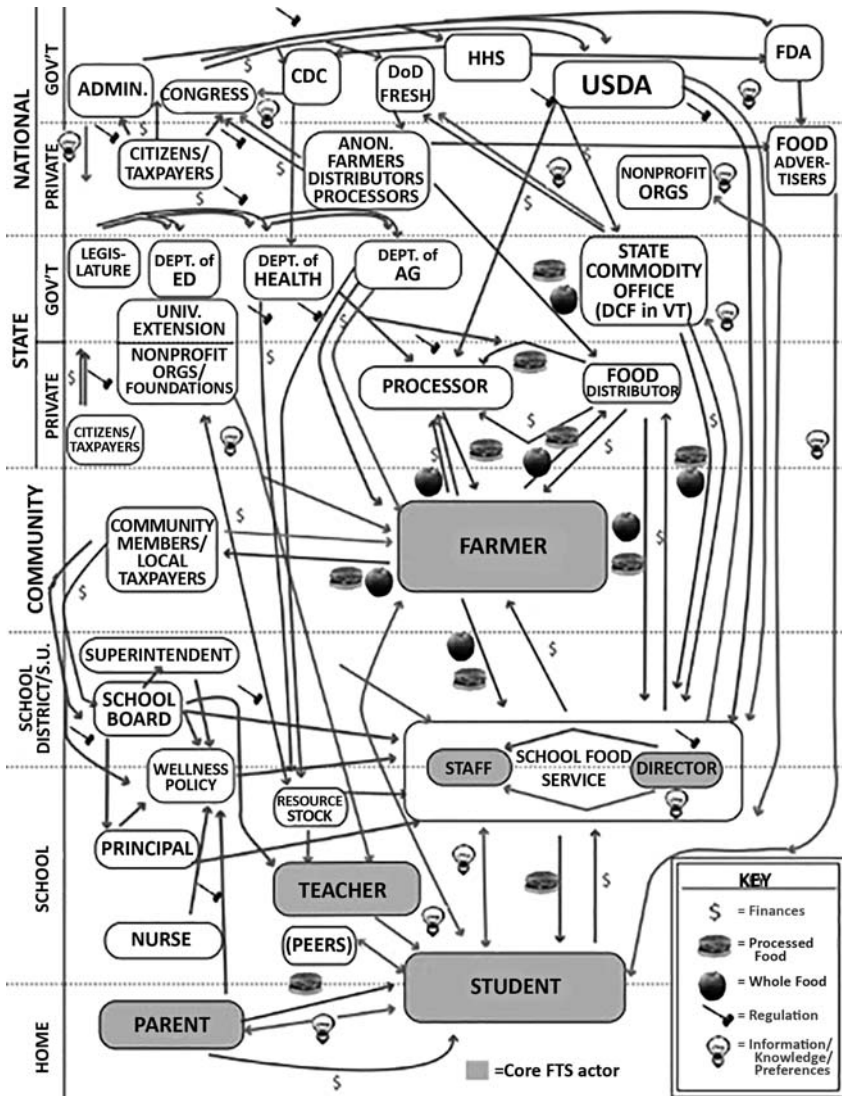


Figure A.1 Conceptual Map of the Farm to School Responsible for Managing the Flow of Whole and Processed Food Products between Farms and Public Schools in the United States.

This concept map shows the range of network actors arranged by sector and jurisdictional levels. Network ties are inferred for monetary exchanges, food (whole and processed) movement, regulatory oversight, and information sharing. Permission granted to replicate from original source: Conner, D., King, B., Koliba, C., Trubek, A., and Kolodinsky, J. (2011). Mapping Farm to School Networks: Implications for Research and Practice. *Journal of Hunger & Environmental Nutrition*, 6, 133–152.

Key findings/advances found in this study:

- Employs a qualitative case study approach to describe the key actors involved in supporting programmatic efforts to increase the consumption of local, fresh foods in public schools across the United States.
- A complex set of actors operating across many scales were identified (see Figure A.1) as were key flows of information, funding, whole, and processed foods.
- Better understanding of the connections of actors and flows of resources between and among levels can inform efforts to address many barriers to fuller implementation of farm to school programming (funding, coordination, and capacity).
- Several leverage points for policy makers and advocates looking to increase the sourcing of local food products in public schools are identified.

APPLICATION B: IDENTIFICATION OF ACTORS WITHIN A SMART GRID DEPLOYMENT NETWORK

Koliba, C., DeMenno, M., Brune, N., and Zia, A. (2014).
The salience and complexity of building, regulating
and governing the smart grid: Lessons from a statewide
public-private partnership. *Energy Policy*.
<http://dx.doi.org/10.1016/j.enpol.2014.09.013>

Network policy roles

Policy coordination; project implementation; regulatory alignment

Abstract

Smart grid deployment unfolds within a diverse array of multi-institutional arrangements that may be too fragmented and decentralized to allow for the kind of large-scale and coordinated investments needed to properly deploy the smart grid. This case study provides an account of how one state arranged for and eventually deployed smart grid technology to over 85% of its residents. The study asks: does the deployment of the smart grid introduce new socio-political variables into the electricity distribution industry? To make sense of the socio-political variables shaping the industry and regulators, the Salience–Complexity Model is used to assess whether the smart grid raises or lowers the level of public scrutiny cast upon the

industry (issue salience) and the level of technical capacity needed to execute and utilize the smart grid (technical complexity). The conclusions to be drawn from this study include: smart grid technology heightens the issue salience and the technical complexity of electricity distribution, but the smart grid will likely not have a significant impact on the restructuring of electricity regulation.

Methods

Single case study; source document analysis; interviews; critical event analysis

This study undertaken by Koliba et al. (2014) looks at the types of network actors who have collaborated to envision and deploy the next generation of energy distribution technologies, commonly referred to as the “smart grid.” The context for the formation of this network was the emergence of new digital technologies that allow electricity utilities to monitor energy consumption of residential and commercial customers in shorter intervals of time. By installing “smart meters” in properties, utilities have a more comprehensive understanding of where electricity outages occur, as well as how “peak demand” occurs and may be managed. This information improves the capacity of utilities to manage demand for energy more efficiently. For consumers, the introduction of smart grid technologies can provide them with finer grained information about their own energy consumption patterns. The promise of the smart grid lies in the growth in awareness of energy consumption—with potential benefits conveyed at both the utility and consumer levels.

The diffusion of such new technologies requires the use of regulatory and partnership networks. This case study outlined how the role of these networks evolved over time, from serving the primary purpose of scoping out emergent technologies and resourcing options, to the development of new regulatory frameworks to govern a digitized smart grid, to the collaboration between energy transmission and distributors, as well as federal and state funding sources. In this instance, a large catalyst for the deployment of smart grid technologies was the infusion of millions of dollars designed to stimulate the economy following the 2009 financial crisis. Koliba et al. undertook a case study of how one state, Vermont, used a network to scope, design, fund, and deploy smart grid technologies throughout the state. This network includes several energy utilities, the state’s energy transmission company, the State Public Service Agency, the State Public Service Board, federal agencies, and industry associations.

Figure B.1, below, presents another way that governance networks can be visualized, in this case, using a multi-level, 3D plane approach. The bottom level plane is visualized as the consumers, who have new knowledge capital about their own energy consumption patterns and can use this information to conserve energy and save money. The middle layer of this visualization is the utility companies who have entered into collaborative partnerships to share common communications infrastructures, information around technology choices, and

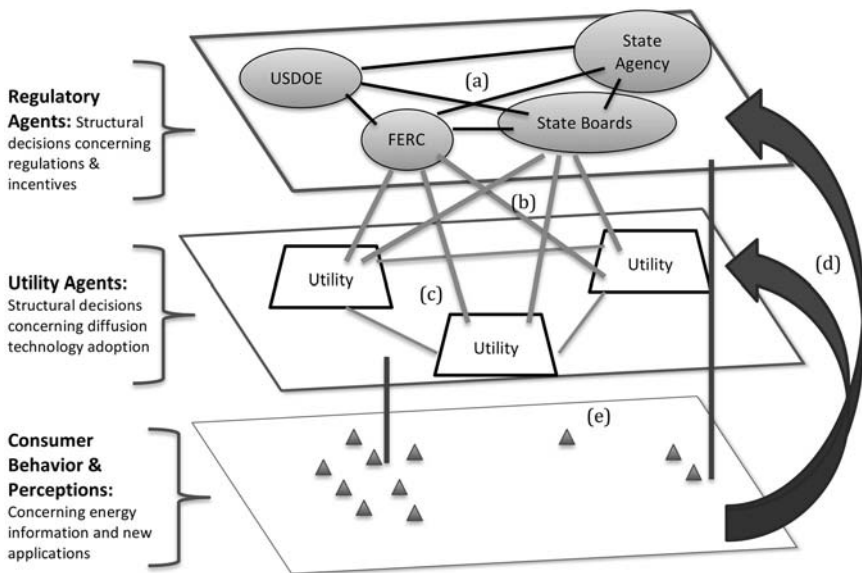


Figure B.1 Conceptual Model of Smart Grid Deployment and Regulation Network.

Figure B.1 illustrates how regulatory agents operate within an intergovernmental framework predicated on constitutional law, adjudication, rule making, precedence, and practices operating across intergovernmental ties (a). Regulatory agents have formal ties to utility agents via statute and informal ties through professional association, project planning boards, and committees (b). Utility agents (that may be comprised of electricity distributors, transmission operators, efficiency and conservation utilities, and other third-party service providers) operate with their own institutional rules and may engage in formal partnerships or informal strategic relationships with other utility agents (c). Consumer behaviors and perceptions may be treated as exogenous drivers of regulator and utility agents' decision heuristics (d) or tied to agent based models of consumer behavior imported from other projects (e). This conceptual model is particularly focused on strategic decision making during the implementation and early adoption of smart grid technologies. This model does not adequately depict the complexities associated with the full range of operational dimensions of electricity distribution and transmission in a smart grid era.

matters of interoperability. The top layer is conceived as the governmental agencies at the state (public service board, Agency of Public Service) and federal (U.S. Department of Energy) levels and the Federal Energy Regulatory Commission (FERC).

Key findings/advances:

- A case study of the State of Vermont's efforts to plan for, fund, design, and implement "smart grid" technologies across 80% of electricity consumers in the state was rendered. A partnership network of electricity distribution utilities, energy transmission company, and state regulating agencies is described (see Figure B.1).
- Collaboration between industry and government is detailed. Multiple policy streams theory (Kingdon, 1984) is used to demonstrate how policy problems and policy solutions were coupled through the development of a partnership network.
- Gormley's Salience and Complexity Model (1986) is used to describe how this network was governed through an action arena designed to negotiate the highly complex and highly visible considerations pertaining to large-scale infrastructure upgrades.
- The evolution of the network is described over time, with critical events analyzed. Implications for public-private partnership development for critical infrastructure deployment is offered.
- The smart grid's capacity to facilitate feedback between consumers, utilities, and regulators is discussed (represented in the arrows flowing from the consumer layer in Figure B.1).

APPLICATION C: IDENTIFICATION OF ACTORS WITHIN A HARBOR MANAGEMENT NETWORK

Kanwar, P., Koliba, C., Greenhalgh, S., and Bowden, W. B.
(2015). An institutional analysis of the Kaipara Harbour
governance network in New Zealand. *Society & Natural
Resources*. DOI:10.1080/08941920.2016.1144838

Abstract

Common pool resources are increasingly examined through social-ecological systems (SES) lenses to understand multifaceted natural resource issues

through interdisciplinary approaches. Using frameworks grounded in environmental governance and SES, we examine the multijurisdictional institutional network of Kaipara Harbour in New Zealand. We find that while the conventional form of regulatory management has persisted until recently, the network has been modified to a more collaborative and cooperative configuration. We argue that although the decision-making capacities of the Kaipara Harbour network are unchanged, the emergence of informal and self-organized subsystems is vital to the successful management of the harbor. This case illustrates the value of combining the governance network framework, allowing us to view the material relationships between actors, and the SES framework, pressing us to isolate those action arenas with the most power, the most legitimacy, and perhaps the more effective role to play in stewarding the region's natural resources.

Methods

Interviews; source document analysis

Kanwar et al.'s (2015) study of the governance of social and ecological features of Kaipara Harbour in New Zealand demonstrates how a governance network analysis framework can be applied to contexts outside of the United States. The environment around the harbor is under threat from complex land uses that are damaging the region's ecosystems and pitting the region's agricultural and fishing industries against one another. This case study looked at how the governance of the region's harbor systems evolved over time—using 1991 and 2013 as references. Table C.1, below, outlines the range of network actors and the years that they appear as actors. This study highlights the role that new federal environmental policies play in bringing new actors into the governance network.

Figure C.1, below, demonstrates another way that governance network configurations can be visualized. The left-hand figure shows a conceptual diagram of the governance network in 1991, and the right-hand figure the governance network in 2013. The 2013 governance network illustrates the expansion of actors and the development of new strong and weak ties between those actors.

Key findings/advances:

- Outlines the key actors in the governance of Kaipara Harbour's social-ecological system over time, including identification of key resources contributed by each actor (see Table C.1).

Table C.1 List of Actors in the Kaipara Harbour Governance Network in 1991 and 2013

<i>Actor</i>	<i>Resources Contributed</i>	<i>Year</i>	<i>Scale</i>	<i>Sector</i>
Department of Scientific and Industrial Research	K	1991	National	Public
Ministry of Agriculture and Fisheries	K, F, P	1991	National	Public
Ministry of the Environment	K, F, P	1991, 2013	National	Public
Ministry of Primary Industries*	K, F, P	2013	National	Public
Department of Conservation	K, P	1991, 2013	Regional	Public
Environmental Protection* Authority	K, P	2013	National	Public
Forest and Bird	K, P	1991, 2013	Regional	NGO
Integrated Kaipara Harbour* Management Group	K, P, C	2013	Regional	NGO
Kaipara Harbour Sustainable* Fisheries Management Group	K, P, C	2013	Regional	NGO
Crest Energy*	K, F	2013	National	Private
Landcare Research*	K	2013	National	Private
National Institute of Water* and Atmospheric Research	K	2013	National	Private
Ngāti Whātua	K, C	1991	Regional	Indigenous
Nga Rima O Kaipara Trust*	C, P	2013	Local	Indigenous

Table C.1 List of Actors in the Kaipara Harbour Governance Network in 1991 and 2013 (continued)

<i>Actor</i>	<i>Resources Contributed</i>	<i>Year</i>	<i>Scale</i>	<i>Sector</i>
Te Ure o Hau* Settlement Trust	C, P	2013	Local	Indigenous
Waitangi Tribunal*	P, C	2013	National	Indigenous
Northland Regional Council	K, F	1991, 2013	Local	Public
Auckland Regional Council	K, F	1991	Local	Public
Auckland Council*	K, F	2013	Regional	Public
Kaipara District Council	K, F	1991, 2013	Local	Public Rodney
District Council	K, F	1991	Local	Public

This is a list of critical actors responsible for the governance of Kaipara Harbour, New Zealand. The year the actor was officially recognized is provided, as is the scale, sector, and type of resources each actor contributes. Modified from: Kanwar, P., Koliba, C., Greenhalgh, S., and Bowden, W. B. (2015). An institutional analysis of the Kaipara Harbour governance network in New Zealand. *Society & Natural Resources*. DOI:10.1080/08941920.2016.1144838.

Resource Flows: K: Knowledge, F: Financial, P: Political, C: Cultural

Those actors or sectors denoted with * are new to the network since the 1991 analysis

- Highlights the relationship between seminal legislative changes and network configurations (see Figure C.1), including key action arenas, at two time periods.
- Underscores centrality of cultural capital and indigenous institutions in the governance of the region's social-ecological system.
- Demonstrates how case study analysis can be used to describe and analyze the evolution of a governance network over time.

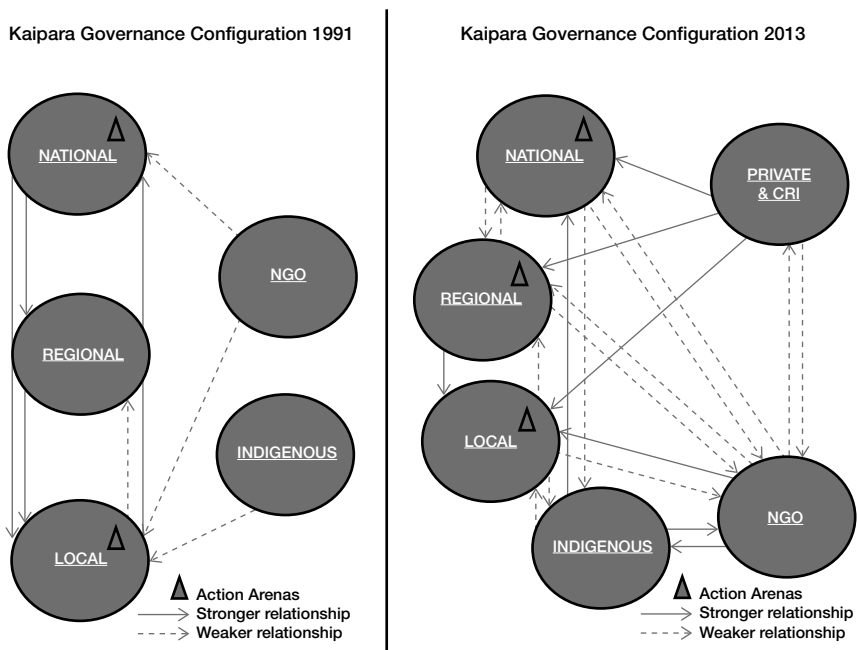


Figure C.1 Concept Map Comparison of Kaipara Harbour Governance Network Configuration in 1991 and 2013.

These concept maps visualize changes in the number and relative strength of ties between actors lumped by sector. This comparison shows the growth in network ties that have emerged over time as interest in the governance of Kaipara Harbour has expanded. A stronger role of indigenous actors is noted. *Source:* Modified from: Kanwar, P., Koliba, C., Greenhalgh, S., and Bowden, W. B. (2015). An institutional analysis of the Kaipara Harbour governance network in New Zealand. *Society & Natural Resources*. DOI:10.1080/08941920.2016.1144838.

Notes

- 1 (*As You Like It*, Act II, Scene VII, Lines 139–166) (Thurber, 1922, p. 39).
- 2 (1989, p. 1221).

Chapter 4

The Ties between Actors

The ties that bind
Now you can't break the ties that bind . . .

—Bruce Springsteen¹

This chapter focuses on the nature of the “multiplex” ties that may exist between network actors. We begin with a discussion of social exchange theory and some assumptions regarding the distinctions between actor autonomy and interdependence that exist when ties facilitate the flow of resources between network actors. Drawing on some of the core conceptual tenets of social network analysis, we discuss how ties may be characterized along a continuum of formality and strength. We then define social ties in terms of the types of authorities that flow between network actors, based upon an expanded conception to principal-agent theory that accounts for the existence of ties that only exist when network actors are seen as co-equals.

The types of characteristics that particular network actors bring to the network (those goals, resources, and roles outlined in Chapter 3) inform the types of ties that are able to be forged. Reminded of the principles of holism that exist in governance networks, a viable argument could be made going in the opposite direction as well, implying that we must recognize that the characteristics particular network actors bring to a governance network get shaped, in large part, by the nature of the ties that are forged between them. This is long understood in institutional and systems theories as the role that “external” environments play in determining organizational trajectories.

The characteristics of multiplex ties have traditionally focused on the degree of strength and coupling, the extent to which a tie serves as a bridge to other network clusters. The type of multiplex ties that are possible in governance networks serves as the material conduit through which resources flow from one



Figure 4.1 Four Basic Ways to Define Resource Change Ties.

node to the other. The range of resource capitals discussed in the previous chapter can flow or be exchanged across nodes.

That ties may facilitate more than one type of resource flow was noted by Provan, Fish, and Sydow (2007) who observed that there often exists a wide array of multiplex ties between network actors. They noted how the multiplexity of ties lends some measure of stability to the relationships, “because they enable the connection between an organization and its linkage partner to be sustained even if one type of link dissolves” (p. 489). To illustrate this we can consider how a relationship between actor A and actor B may include the exchange of information through formal and informal challenges, as well as involve deeper levels of engagement—such as coordinating tasks and collaborating on projects, exchanging financial resources, and participating in hierarchically construed reporting relationships (see Figure 4.1).

To understand how multiplex ties function, we first turn to Rod Rhodes’s social exchange theory (1997). We then look at the extent to which ties can be formal or informal, strong or weak. We conclude this section by exploring how the characteristics of specific ties may be construed as nested in networks. In other words, we consider subnetworks as being construed as comprised exclusively from, or in relation to, other types of ties through which resources flow.

Social Exchange Theory

At the core of social exchange theory is the notion that social actors enter into a network for a reason, often understood as a goal of resource acquisition or alignment or some kind of goal attainment that can be realized through resource acquisition or alignment.

According to Rod Rhodes, “The distribution, and type, of resources within a network explains the relative power of actors (individuals and organizations). Different types of governance networks will be distinguished by particular patterns of resource-dependency” (Rhodes, 1997, p. 11). The key ideas in exchange theory are as follows:

1. Any organization is dependent upon other organizations for resources.
2. In order to achieve their goals, the organizations have to exchange resources.
3. Individual resource exchanges are influenced by a wider circle of actors that form the critical “action arenas” that help to define institutional rules and collective norms that can define, guide, or constrain the parameters of resource exchange within a given network.
4. Variations in the degree of discretion regarding resource exchanges are a product of the specific goals of network actors, and the relative power potential of interacting organizations.
5. Power and authority of individual actors within a network are shaped by the quality and quantity of resources held by each organization, prevailing institutional rules, and collective norms (e.g., the “rules of the game”), and as a result of these resources exchanged between organizations over time (adapted from Rhodes, 1981, pp. 98–99).

At its core, exchange theory recognizes the interdependent nature of social relations within governance settings. We find this assertion embedded in the thought experiment posed by Thomas Paine in his pamphlet of 1776, *Common Sense*, in which he viewed the emergence of governments out of social necessity. In essence, no individual person or social organization exists in a vacuum. Social entities are required to exchange resources with their external environment. This observation is why networks are such a powerful metaphor and analytical tool to study modern forms of governance. To one degree or another, all social actors are required to exchange resources (money, information, material goods and services, social intimacy, etc.) with other social actors on a daily basis. Considered at wider macro-level scales, governance networks are comprised, at their core, as series of extensive and voluminous resource exchanges between individuals, groups, and organizations across different scales of jurisdiction and geography. Understanding that these resource exchanges can be continuous or episodic, we construe social exchange theory as, no less than, the basic governing rule structures of all social networks.

Considered in the context of a social exchange theory, power is said to be the inverse of dependence (Stevenson and Greenberg, 2000), meaning the less dependent a social actor is on others, the more control it has over its own fate, and thereby the more power it has. This view of power places value on the relative autonomy a network actor possesses. However, when collaborative

network arrangements exist, dependence can lead to increasing the capacity of individual social actors to develop and wield power. In this context, the articulation of power shifts from that of authority *against* or *over*, to authority *with*. This observation led Schaap to describe resource exchange as existing “in a field of tensions between dependence and autonomy” (Schaap, 2008, p. 121).

Interdependencies between network actors may be more or less asymmetrical. Herrting understands dependency as a matter of the perception of the network actors involved. “It is possible to find situations where all actors are aware of strong mutual dependencies, while the intensity of their motives for handling the situation through some kind of coordination still differs slightly . . . even small asymmetries may cause big problem when it comes to institutionalizing governance networks among limited rational actors” (Hertting, 2008, p. 50).

Social exchange theory also accounts for the tendency of social nodes to cluster. Rhodes defines these clusters in terms of “dominant coalitions” (1997). In this book, we describe dominant coalitions in terms of the “communities of practice” and “action arenas” chiefly responsible for governing governance networks.

The “rules of the game” in operation in most governance networks can take one of two forms, both of which inform the other. Some rules are reified, existing as written rules, standards, and procedures. Laws and legally binding contracts help to structure the rules that structure and guide relationships in governance networks. We refer to these as *explicit rules and norms* that help shape network accountability. The informal or *implicit rules and norms* of the game also manifest in the “theories in use” (Argyris and Schon, 1995), the tacit knowledge and underlying norms and values that are formed within and across all social ties. In other words, ties are not only shaped by the resources that flow across them, but through the explicit and implicit rules and norms that provide the contractual basis on which the tie is formed and sustained. The extent to which the rules of the game governing resource exchanges are explicitly recognized is a matter that concerns the formality of the ties.

Resources Exchanged

Using the eight capital resources discussed in Chapter 3, we can infer the range of possible resource exchanges that may take place between any two actors within a governance network. To reiterate, in social exchange theory one actor may exchange the same kind of capital resource, such as exchanging information (e.g., knowledge capital for knowledge capital), or trading one staff member’s time and expertise with another’s (e.g., human capital for human capital). More often, however, one kind of resource is exchanged for another kind of resource.

Funders contribute money (financial capital) to support the purchase of natural, physical, and human resources. This particular form of financial exchanges forms the basis of market exchange, the very foundation of market-based economic systems. Other examples of resource conversion include taking human capital to build physical capital, while social capital may be needed to generate knowledge capital.

Table 4.1 provides one way to understand the range of possible combinations of resource exchange. This matrix could be construed as a Bayesian network of ties that, at any one point in time, may signal or be “pulsed” with a resource exchange. Most market analysis attempts to capture these “pulses” of exchange as the buying and selling of goods and services. These pulses of exchange can take other forms as well: as exchanges of information, as acts of task coordination, and as exchanges of “in-kind” supports of human, physical, natural, political, cultural, and social capital. By understanding that more than one form of capital can flow between two or more nodes, we can capture how the pulses of exchanges over time form patterns, shape power dynamics, and give rise to cultures and institutional rule structures that govern whole networks.

The network-wide, meta-level institutional rule structures that inform network structures and functions have best been described and analyzed by Elinor Ostrom and her associates who have been chiefly concerned with the governance of common pool resources (1990). She differentiates between the types of rules that aid in the governance of resource exchanges and pooling (as described in Stone and Ostrower, 2007, p. 424):

1. *Operational rules* govern day-to-day activities of appropriators.
2. *Collective choice rules* concern overall policies for governing common pool resources and how those policies are made.
3. *Constitutional choice rules* establish who is eligible to determine collective choice rules.

The pulses of resource exchanges in governance networks essentially “add-up” to form what we describe in Chapter 6 as network functions. We will differentiate between core operational functions that are shaped by the type of choice rules highlighted above, and domain specific functions that are very much tailored to the policy goals and objectives of the governance network.

Formality and the Coordination of Ties

More frequent exchanges (Mandell and Steelman, 2003) of resources provide a measure of stability and formality to the network tie through the creation of explicit rules and procedures (Argyris and Schon, 1995). But the formality of a

Table 4.1 Range of Combinations of Resource Exchanges

		<i>Resources Provided by Actor B</i>							
		<i>Financial</i>	<i>Natural</i>	<i>Physical</i>	<i>Human</i>	<i>Social</i>	<i>Political</i>	<i>Cultural</i>	<i>Knowledge</i>
Resources Provided by Financial A	Financial								
	Natural								
	Physical								
	Human								
	Social								
	Political								
	Cultural								
	Knowledge								

tie can be construed along a continuum. Myrna Mandell and Toddi Steelman describe how interorganizational networks can be characterized in terms of intermittent coordination, through which network actors get physically (or presumably, electronically) convened and reconvened when occasions warrant. Other interorganizational networks may be supported through temporary coordination, thereby existing for limited amounts of time, dissolving when common goals or network-wide tasks are completed.

A *formal* social structure is defined as “one in which the social positions and the relationships among [social actors] have been explicitly specified and are defined independently of the personal characteristics of the participants occupying these positions” (Scott, 1987, p. 17). Formal structures result through the joint recognition of common ties and obligations. The formality of governance networks may be ascertained by determining the extent to which set, prescribed, or customary methods, rules, or norms have been established to govern network activity. Such methods may exist as the reified rules or network by-laws, or in the establishment of explicit guidances used to govern network interactions.

Most studies of tacit knowledge in organizational settings underscore the proliferation of hidden or unspoken knowledge and norms within any social interactions (Senge et al., 1994; Argyris and Schon, 1995). When explicit norms become formalized, they often become reified, essentially becoming objective “things,” such as written rules, standards, and contractual agreements (Wenger, 1998). We can also recognize that resource changes may occur on a more informal basis—as voluntary exchanges between organization representatives at meetings, conferences, and informal gatherings, and as group norms that have been established over time.

The frequency of coordination within a governance network and the degree of formality of the rules, norms, and procedures it possesses need not be coupled. We can envision scenarios in which a governance network that forms as a result of a grant and contract agreement is actively coordinated very infrequently, but relies on reified rules and standards found in the written contract between network actors to govern this coordination when they do meet and interact. We find this scenario also possibly taking place in regulatory subsystems, when a regulator’s coordination with its regulated agents is infrequent, but the standards and operating procedures around which regulations are enforced are formally written, serving as the explicit guidelines around which compliance is sought.

Strength of Ties

Strength of ties has been a key way to characterize social ties for many decades. Some common conceptual tools to analyze the strength of ties have emerged

over the last forty years, including Mark Granovetter's (1973) analysis of the "strength of weak ties," Charles Perrow's (1967) and Karl Weick's (1976) introduction of the "coupling" of ties, and Ronald Burt's (1997) "structural holes" theory, while social capital theory has emerged as a central construct in network analysis, having brought to the fore the importance of social ties and the requisite shared values and norms that are built as a result of them. Two types of social capital are said to exist: bonding and bridging (Putnam, 1993, 2000). In this section we present an overview of the various characteristics that have been used to describe social ties.

The relative strength of a social tie has been historically characterized in terms of the levels of duration of the contact, the emotional intensity and intimacy felt between two social actors, and the level of exchange of resources (Granovetter, 1973; Degenne and Forse, 1999, p. 109). Much of the seminal research on social ties has ascertained that the strength of ties between two actors is based on the frequency of contact (e.g., duration), the measurement of resources exchanged between the actors, and the subjective perceptions of an actor's ascertainment of the depth of emotional intensity of the relationship.

In Chapter 3, we discussed how the centrality of a network actor is a key characteristic of the individual network node. We noted that although more central actors possess access to certain kinds of power and authority, centrality does not necessarily mean that an actor is imbued with more power and authority than more peripheral actors. Granovetter's advancement of the "strength of weak ties" argument (1973) helps to explain this phenomenon. Weak ties that are characterized by infrequent contact, little emotional intensity, and little in the way of resources to be exchanged are often more effective at achieving certain kinds of common objectives, most notably, assisting one actor in a dyad to find gainful employment (harkening back to the old adage "it's not what you know, it's who you know"). The rise of social networking sites that have blossomed during the early years of the twenty-first century are facilitating the proliferation of weak ties. Social networking sites like LinkedIn are viewed as essential tools for those seeking new employment opportunities.

The notion of coupling is a widely recognized analytical construct in organizational development theory (Perrow, 1967; Weick, 1976). Although the relative tightness or looseness of the coupling is not exactly synonymous with the strength of the tie, we bundle the terms here. The notion of tight coupling has often been associated with the analysis of bureaucratic control (Scott, 1987). More tightly coupled ties imply that the administrative authorities that govern the tie are more strongly reinforced. Traditionally, tight coupling has been equated with strong command and control or principal-agent relations. However, the challenges associated with principal-agent dynamics, often characterized in terms of the classical principal-agent problem (Donahue, 1989; Milward and

Provan, 1998), suggest that, oftentimes, the coupling of vertical, hierarchical administrative ties is premised on weaker, more loosely coupled ties.

Later in this chapter, we discuss the nature of more horizontally, co-equally arranged ties, suggesting that these ties may also be characterized as being premised on stronger/tighter bonds. The strength and tightness of ties have a significant bearing on how a governance network is governed. In later chapters we focus particular attention on how the strength and tightness of ties impact a network's accountability regimes and performance management systems.

We would be remiss to not mention the contribution that social capital theory can play to the understanding of tie strength and tightness. Burt's study of the "structural holes" that persist in almost any organizational (and by inference interorganizational) setting is particularly relevant here (1997). Essentially, Burt's research found that innovative practices require some measure of structural holes to persist within an organizational setting. Perceived gaps between social actors may be bridged by innovators. With these bridging ties, opportunities for new exchanges of resources (knowledge, for instance) facilitate new practices. Burt's work (1997), along with Robert Putnam's research on civil society in Italy and the United States (1993, 2000), has led to the common understanding that social capital may be described in terms of its bridging or bonding functions. Bridging social capital tends to be based on weaker, more loosely coupled ties. Bonding social capital tends to be based on stronger, more tightly coupled ties. Distinguishing between bonding and bridging social capital also has implications for the relative openness and closedness of the network, a point we will address in Chapter 7 when we discuss the boundaries of systems level constructs.

SOCIAL NETWORK ANALYSIS AND SOCIAL CAPITAL

1. Social capital shifts the focus of analysis from the behaviour of individual agents to the pattern of relations between agents, social units and institutions . . .
2. [It acts] as a link between micro-, meso-, and macro-levels of analysis . . .
3. [It is] multi-disciplinary and inter-disciplinary . . .
4. It reinserts issues of value into the heart of social scientific discourse . . .
5. It possesses a heuristic quality that allows for analysis, prescription and exploration.

Source: Baron, Field, and Schuller (2000). *Social capital: Critical perspectives* (pp. 35–37). New York: Oxford University Press.

Flow of Power and Authority across Ties

A persistent assumption made by some, that all social networks are based on voluntary ties between co-equals, belies the critical role that power and authority will almost always play in governance networks. Despite many classic studies of power within organizational settings (see Mintzberg, 1983, etc.), the point that hierarchies are a form of network has yet to be widely acknowledged within the literature. The move away from describing social networks merely in terms of their voluntary nature is critical to understanding how power is distributed within interorganizational networks.

Conceptual frameworks designed to analyze social power dynamics are abundant, and can be found across the literature of virtually every social science. Of particular interest to us are the kinds of conceptual frameworks that provide the means for rendering a relatively simple structure for describing relational power. Theories of centralization-decentralization are helpful in this regard (Hoggett, 1996; Waldo, 2006). We would argue that the reference to central and peripheral roles implied in discussions of decentralization is particularly useful in social network analysis. “Top-down” and “bottom-up” distinctions of organizational structure are also useful, particularly when hierarchical network structures are implicated. Dating back to Weber’s first introduction of bureaucratic theory, we find considerations of power being explored as administrative authorities characterized as supervisor-subordinate relations.

There is a smaller, yet still extensive, body of literature that explores the nature of power in terms of the voluntary bonds forged through shared values and norms (Mintzberg, 1983; Burt, 1997). Social psychologists, sociologists, and more recently, behavioral economists have studied how cooperative behaviors come about. Social capital and game theories are particularly useful in understanding horizontal ties (Hanaki et al., 2007). Beginning with Robert Axelrod’s now classic iterated prisoner’s dilemma (1980), game theorists have studied the nature of cooperative and collaborative behaviors that manifest between two social actors construed as equals or peers. These developments have deepened our capacity to appreciate how power flows across horizontal relations.

Virtually any comparison between an organization’s formal (oftentimes hierarchical) structure and the nature of relations in actual practice underscores the fact that workers in organizations are often very capable of working across hierarchical boundaries, forging horizontal ties in the process. Thus, an individual may work with supervisors in capacities that look more like peer-to-peer relationships. More recent developments in leadership theory, such as servant leadership (Greenleaf, 2002), facilitative leadership (Stivers, 1993), participatory leadership (Kezar, 2001), transformational leadership (Burns, 2003), and collaborative management (O’Leary and Bingham, 2007) have all underscored the value of working collaboratively with those who have been traditionally

positioned as the followers and subordinates. We have discussed how weaker, more loosely coupled ties have been formed to facilitate the development of new working arrangements (Granovetter, 1973) and innovation (Burt, 1997). Power relations may be complicated by the shifting nature of more innovative working relationships found within contemporary workplace environments.

Lastly, we must account for the possibility that competitive ties may exist, even in the most collaborative of governance networks. Given the nature of some intersector arrangements, private sector firms and businesses may be actors in a common governance network. We have noted how more recent trends toward privatization and partnership have been mounted under the assumption that private sector actors bring a measure of market-based efficiencies to the network, as the elements of competitive ties bring a measure of efficiency to the undertaking. We will discuss competition as an administrative authority that may exist as a feature of markets, as well as a feature of basic human interaction.

Principal-Agent

Dating back to Max Weber's initial introduction of bureaucratic theory, we find considerations of power being explored as a matter of supervisor-subordinate relations. Classical organization development theory, found in the works of Luther Gulick and Lyndall Urwick, and later the works of Simon and others, establishes the basis for describing the "command and control" structures of bureaucracies. The social norms that undergird command and control relations include deference and submission to those in positions of authority. At the macro level, command and control has been used to describe the kind of authority that strong states employ when providing centralized direction over society. More recently, principal-agent theory has emerged from economics and studies of contractual arrangements to provide a picture of vertical relations as they exist in social networks (Milward and Provan, 1998). Theoretically, principals are to have authority over their agents. The typical question guiding the study of principal-agent dynamics in public bureaucracies has been: "Can principal A secure preference P from agent X?" (Koppell, 2003, p. 22).

Principal-agent theory is rooted in market-oriented considerations of agency (Jensen and Meckling, 1976; Eisenhardt, 1989) and eventually applied to public administration (Moe, 1984; Waterman and Meier, 1998). The focus of principal-agent theory lies in "determining the most efficient contract governing the principal-agent relationship given assumptions about people (e.g., self-interest, bounded rationality, risk aversion), organizations (e.g., goal conflict among members), and information (e.g., information is a commodity which can be purchased). . . ." (Eisenhardt, 1989, p. 58; also see Jensen and Meckling, 1976, p. 310; Waterman and Meier, 1998, p. 175). According to Terry Moe, the principal-agent relationship, "is an analytic expression of the agency relationship,

in which one party, the principal, considers entering into a contractual agreement with another, the agent, in the expectation that the agent will subsequently choose actions that produce outcomes desired by the principal . . . The agent has his own interests at heart, and is induced to pursue the principal's objectives only to the extent that the incentive structure imposed in their contract renders such behaviors advantageous" (1984, p. 756). Moe describes principal-agent theory as, "best understood as founded upon a distinct kind of contractual arrangement, the authority relation" and is, "ideally suited to the analysis of hierarchical relationship, is understandably the major means of formal modeling at present and should become well established as an important tool of organizational analysis . . ." (1984, pp. 743, 758).

In the extensive literature pertaining to bureaucratic control (Wood and Waterman, 1991) the behavioral contractual authority in organizations has been considered in the context of "command and control," "unity of command," and "span of control" relationships between supervisors and subordinates (Fayol, 1930; Gulick, 2004). Principal-agent ties can be understood in terms of classical bureaucratic "*reporting*" relationships, in which agents report to principals as a function of a formally defined organizational chart. These reporting relationships are often embedded in a "behavioral contract" in which compliance with expected norms, goals, etc., is rewarded with remuneration (e.g., wages, benefits, etc.) (Eisenhardt, 1989, p. 58). Grants and service and procurement contracts are policy tools that enable the development of an "outcome-based contract" between principal and agent involving the *exchange of financial resources* (Kelman, 2002; DeHoog and Salamon, 2002; Beam and Conlan, 2002; Van Slyke, 2006). Written contracts articulate the rule structuring the principal-agent relationship. "Stewardship theory" has been advanced as a way to describe and perhaps even legitimize the principal-agent problems associated with grant and contract arrangements between governments and nonprofits (Davis, Schoorman, and Donaldson, 1997). Stewardship theory has been suggested as a way to accommodate the types of power sharing arrangements that arise as reasoned responses to these shifting roles within grant and contract arrangements where principals' and agents' incentives align rather than conflict (Van Slyke, 2006).

Waterman and Meier (1998) have argued that existing principal-agent theory is not comprehensive enough to capture the additional forms of administrative authority and accountability. To develop a generalizable model of network agency we will need to pull on classical principal-agent and stewardship theories to describe strong and weak principal-agent relationships. We will also draw on elements of game theory and social capital theory to round out what appears to be a second major limitation of principal-agent theory. To date, agency theory has also not taken into account the capacity of two or more social actors to be involved in co-equal relationships outside of the formal principal-agent contract sustained through negotiation and the mutual development of trust.

In both the classical and more contemporary views of governance and control within vertical arrangements, real-world contexts arise that complicate matters. Bounded rationality (Simon, 1957) and information asymmetries may provide subordinates (or agents) with more power in the relationship. In essence, these complexities can lead to the “leveling of the playing field,” potentially displacing positional authority with more lateral forms of authority even within the most tightly coupled bureaucracies (Durant, 2001). Brass and Burkhardt explain how this leveling works:

The relationship between power and dependence becomes more complex when one considers the multitude or variety of outcomes that may be considered relevant or in demand in organizations. Thus, *A* may control a particular outcome that is relevant to *B*, but *B* may control another, different resource that is desired by *A*. Thus, in order to acquire power in an organization, two conditions are necessary: actors must both decrease their dependence on others and increase others' dependence on them.

(Brass and Burkhardt, 1993, pp. 193–194)

As a way to explain the kind of fragmented administrative authorities found in the principal-agent theory in hybrid organizations, Jonathan Koppell challenges the notion that vertical administrative authority may be simply understood in terms of a principal-agent relationship (2003). He suggests that previous studies have tended to focus on understanding how principals can secure desired actions from agents. The roots for framing principal-agent studies as a top-down consideration may be found in the scientific management movement of the early twentieth century, and still very much pervades the management literature today. Koppell critiques this view by questioning some of the central assumptions embedded in the root question (2003). He observes that rarely is there a clear sense of which principals are seeking which preferences from which agents, as outlined in Figure 4.2.

Koppell rightly recognizes that very often there exists a multiplicity of possible combinations of principals, preferences, and agents. He provides for the possibility that preferences may exist independently of the influence of any given principal. He also takes into consideration the view of the principal-agent relationship “from the bottom up,” recognizing that agents bring resources to the relationship that may be mustered to renegotiate or bargain for certain power. Such negotiation and bargaining may be a part of explicit contracts and other legally binding agreements, or may be embedded in more tacitly undertaken negotiations and bargaining that operate at a more informal, yet politically charged level. The chronic and enduring nature of the principal-agent problem calls for the extension

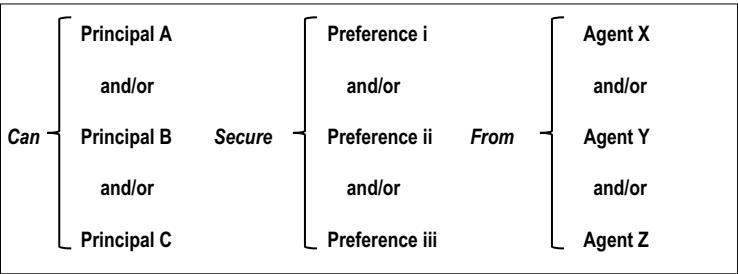


Figure 4.2 The Complication of Principal-Agent Theory.

(Modified from Koppell (2003). *The politics of quasi-government* (p. 70). Cambridge: Cambridge University Press.) Printed with permission of Cambridge University Press.

of principal-agent studies to studies of the formation of cooperative ties between peers, partners, and collaborators.

The Principal-Agent Problem

In the kinds of interorganizational governance networks that are the focus of this book, the dynamics that shape one actor’s authority over another is best described in terms of the principal-agent theory and, more importantly, the “principal-agent problem” that serves as a central thesis of the theory. Donahue describes the principal-agent problem:

A principal commissions an agent to act on the principal’s behalf. In general, the agent’s interests do not entirely coincide with those of the principal; the principal does not have complete control over the agent; the principal only has partial information about the agent’s behavior. The agency relationship consists in the reliance of a principal upon the agent with an agenda of his own. The agency problem is the difficulty, in all but the simplest such relationships, of ensuring that the principal is faithfully served and that the agent is fairly compensated.

(Donahue, 1989, p. 38)

Authority *over* becomes more a matter of *negotiated between* in most governance networks. In essence, in governance networks, “every group or organization which attempts to exercise control must also attempt to win consent from the governed” (Selznick, 2003, p. 155). Principal-agent theory focuses on the relevance of transaction costs associated with exerting this kind of authority. Reputation becomes an important element in the bargaining, negotiating,

and mutual adjustment activities undertaken in networked relationships (Morris, Morris, and Jones, 2007, p. 95). In this case, the challenges associated with principal-agent dynamics push this relationship away from a simple vertically arranged relationship to one that is decidedly more mixed in nature.

Organizational forms that rely on concessions and compromises that emerge through negotiation and bargaining are decidedly mixed in nature. Negotiated authority must rely on some combination of vertical and horizontal ties. Compliance in negotiated agreements is based on remuneration—the trading of one resource for another. These resource exchanges are shaped through incentives, concessions, and compromise.

An emerging strand of theoretical literature has incorporated negotiation and bargaining into principal-agent theory. Transactional authority presumes that both the principal and agent share in setting the basis of their relationship through formal and informal arrangements and through a process of bargaining and exchange rather than the unilateral choice of the political principal (Carpenter and Krause, 2015). A critical component of transaction authority is what Simon (1957) called “sanctioned acceptance”—the notion that the basis of the authority between principals and agents is derived through mutually beneficial informal rules, professional norms, and organizational cultures. Because principals must gain the sanctioned acceptance of agents for formal rules to have meaning, agents often have a say in the design and content of formal rules posed by their political principals. Principals and agents build trust in one another as they engage in repeated collaboration to design both formal and informal arrangements (Brehm and Gates, 1997). As trust builds among principals and agents, reputationally-based informal incentives (such as professional esteem and being a sought-after policy expert) are used to appeal to both the organization and individual agent’s intrinsic values. Therefore, reputation is essential to transactional authority. As Carpenter and Krause (2015) note, “the credible commitment problem is determined jointly by a bureaucratic agent’s reputation for policy competence, as well as the political principal’s moral hazard” (p. 13).

There are several empirical examinations of the principal-agent relationship that allude to the presence of transactional authority. One particularly interesting area is in the performance evaluations of bureaucratic agencies where the particular policy or task the agency implements is difficult to observe (Kaufman, 1960; Wilson, 1989). Multiple principals including the President (the Clinton administration’s National Performance Review and the Bush administration’s Program Assessment Rating Tool) and Congress (the passage of the Government Performance and Results Act in 1993 and the Government Performance and Results Modernization Act in 2010) have tried to design performance measurement apparatuses designed to ensure external accountability to better understand the motivations and subjective assessments of bureaucratic agents (Moynihan, 2013). Several examinations of the PART evaluations found that when agents

had a better impression of the evaluation scheme, they are more likely to put substantial effort into measuring performance because they would have more trust and a favorable perception on the principal (Gilmour 2006; Frederickson and Frederickson 2006; Lavertu, Lewis, and Moynihan, 2013). This suggests agents can have significant input into their accountability structures and that principals are willing to secure mutually beneficial agreements to facilitate better outcomes.

Taking into account the complexity of relational ties that are possible in governance networks, Sorensen and Torfing argue that policy actors may not “be equal in terms of authority and resources” (Mayntz, 1993, p. 10). “There might be asymmetrical allocations of material and immaterial resources among the network actors” (2008, p. 9). To this end, the proliferation of negotiated authorities is all but ensured in most governance networks.

Co-Equals

The growing recognition of the role that cooperation and collaboration play in effective networks has been fueled by cooperative game theory (Axelrod and Cohen, 1999; Sabatier and Sierra, 2002) and social capital theory (Coleman, 1988), as well as within the research and theory development around teaming and communities of practice (Wenger, 1998). Robert Axelrod’s classic iterated prisoner’s dilemma studies demonstrated how the durability of relationships over time in shared power settings generate “tit-for-tat,” micro sanctioning events that lead to patterns of engagement that can create certain co-benefits over time (Axelrod and Cohen, 1999). When these perceptions of co-benefits align to such a degree, trust may be formed. When tit-for-tat, distributed power settings are developed, principal-agent roles may be decidedly weakened over time to the point of shifting into more co-equal, horizontally configured relationships.

When co-equal relationships possess high degrees of trust, considered here as transcendence beyond tit-for-tat, deeper normative, reciprocal bonds are developed that enable greater levels of collaboration between trusting parties. Trust has been found to be a very strong, collectively, and voluntarily derived shared norm (Lewis and Weigert, 1985; Fukuyama, 1995). The durability and trust that exists between two or more social actors forms the basis for another kind of social contract between agents: one based on shared power and collectively sanctioned norms of collaboration.

When trust is present, social capital is said to have formed (Coleman, 1988; Putnam, 2000; Lesser, 2000). The existence of social capital has been associated with educational success (Coleman, 1988), the diffusion of innovation (Burt, 1997), greater organizational effectiveness (Nahapiet and Ghoshal, 1998), the production of wealth (Fukuyama, 1995), and the vibrancy of civil society (Putnam, 1993), while the importance of trust has been found to be an important

ingredient of successful organizations and interpersonal groups (Gray, 1989) and communities of practice (Wenger, 1998).

The word *collaborate* stems from the Late Latin term *collaborat(us)*, meaning to work or labor together. Collaboration and cooperation are often used interchangeably to describe the relationship forged between two or more peers. Power within these relationships is structured through the social norms of trust and reciprocity.

Social networks have traditionally been described as horizontal ties and, for the purposes of this book, are described at the macro level in terms of collaborative partnerships, coalitions, and strategic alliances. Compliance in collaborative relationships is created through the social norms derived in trust. Drawing on Koppell's model for describing the complexity of principal-agent ties as a template, some may distill cooperative ties into two simple questions: (1) Can A trust B? (2) Can B trust A?

Thompson describes how trust is a fundamental norm of social networks, observing that it is "established to precisely economize on transactions costs" (2003, p. 32). He goes on to add that "trust implies an expected action . . . which we cannot monitor in advance, or the circumstances associated with which we cannot directly control. It is a kind of device for coping with freedoms of others. It minimizes the temptation to indulge in purely opportunistic behavior (Gambetta, 1988)" (Thompson, 2003, p. 46). However, the feeling of trust is a subjective, socially constructed norm or belief that is predicated on the perceptions of the truster.

Ironically, it was Hobbes who first said, "To have friends, is power" (see Degenne and Forse, 1999, p. 115). The application of game theory to the study of cooperative behavior reveals that "the foundation of cooperation is not really trust, but the durability of the relationship." Durability is built up over time through "trial-and-error learning about possibilities for mutual rewards" and imitation of past successful relationships (Axelrod, 1980, p. 182). Sociologists and anthropologists who study trust tend to disagree with this, as they argue that the durability of relationships hinges upon trust and not vice versa. Durability also requires network actors to not tolerate deviant behaviors. Axelrod's study of the iterated prisoner's dilemma underscores the need for networked actors to challenge such behaviors in an effort to bring about greater cooperation (1980, p. 184). As a result, the "reputational capital" of network actors becomes a key element within the establishment of durable, horizontally aligned relationships (Kreps and Wilson, 1982). Reputation becomes an important element in the bargaining, negotiating, and mutual adjustment activities undertaken in networked relationships (Morris, Morris, and Jones, 2007, p. 95).

The tools of social network analysis are often employed to study how cooperative behavior unfolds between two peers. The study of cooperative ties has been a longstanding interest of social psychologists and sociologists

(Collins, 1988). In recent decades, biologists, economists, mathematicians, and computer scientists have examined social cooperation through the lens of evolution, behavioral economics, and game theory. Evolutionary biologists Stuart Kauffman and David Sloan Wilson have popularized the importance that cooperative ties have played in the evolution of human civilization (Wilson, 2007; Kauffman, 2004), essentially arguing that virtuous behavior (directed toward advancing the good of others) has always been a central feature of human development. Behavioral economists are turning to the study of cooperative behavior to better understand the behavior of consumers, the propensity of capitalists to cooperate with one another, and the underlying nature of common assets and public goods. Game theorists have described the underlying rules governing cooperative behavior as a series of “tit-for-tat” exchanges leading to the development of durable and relatively trustworthy relationships.

The role of reputation shifts our locus of attention from the question “Can A punish B for deviating from common expectations?” to the question “Does A even need to punish B? Might B punish himself or herself if he or she deviates from the common norm?”

In its purest form, collaborators can be in such lockstep agreement on means and ends, goals and outcomes, that they approach what some have categorized as a merger, unification, or coadunation. We conclude, then, following Robyn Keast and Myrna Mandell (2014), that collaborative ties may be understood as matters of degree. Several typologies for distinguishing differences between types of collaborative relationships have been posited (Gajda, 2004; Frey et al., 2006; Keast and Mandell, 2014). Frey et al.’s (2006) synthesis of these degrees of collaboration is provided in Figure 4.3.

A range of terms have been posited to distinguish between types of collaboration that vary in depth and breadth of integration and formalization

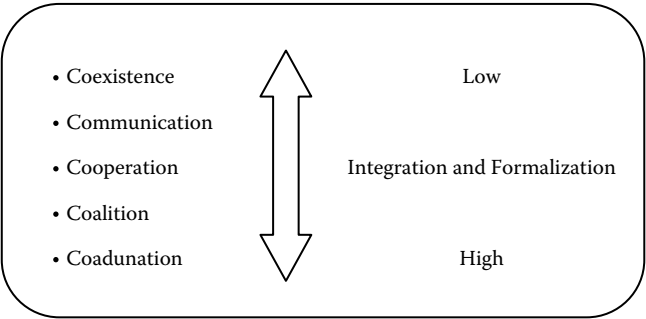


Figure 4.3 Degrees of Collaboration.

(Compiled from: Frey et al. (2006). *American Evaluation Association*, 27, 383–392.)

of ties. Frey et al. (2006) synthesize several of the typologies to have emerged within the program evaluation field, drawing distinctions between levels of collaboration ranging from mere coexistence to coadunation. In their weakest form, collaborative ties do not actually exist; however, the conditions that require mutual coexistence must first exist before collaborative ties are to form, a longstanding lesson drawn from international conflict mediation and negotiation (Watkins, 1999). At their most strongly and tightly coupled, collaborators merge to form a new unit, operating as one. Coadunation means to be closely joined or united. The potential for groups and organizations to merge with others is a very real and, some may argue, common practice.

Competition

We must also hold for the possibility that some administrative ties may be focused on defeating, winning, or otherwise getting a leg up on the competition. The importance of competition has been a mainstay of the theory of Darwinian evolution, under the theorem of the survival of the fittest. The combination of self-selection and variation serves as a compelling guideline for interpreting the importance of self-preserving behavior to the basic foundations of life. When resources are scarce, these dynamics become even more compelling.

The competitive drive is assumed by economists and social theorists to be a central driver of human nature. In politics, competition plays an integral role in elections and the policy-making process. Competition has been observed ecologically as “the struggle among organisms, both of the same and of different species for food, space, and other requirements for existence” (Webster, 1989, p. 300). Competition has been used to describe the relationship between cells, as, for instance, in descriptions of the competitive drive of cancer cells to take over space and functions once held by benign cells. Competition between social actors is defined as the “rivalry between two or more persons or groups for an object desired in common, usually resulting in a victor and a loser or losers, not necessary involving the destruction of the other” (Mintzberg, 1983).

Competition is understood as the central driver of market forces. As we view trends affecting the development of governance networks, such as contracting out and privatization, competitive forces are used, at least in theory, to engender greater efficiencies. Advocates of the new public management framework who place value on the role that market forces can play in delivering better public goods and services essentially make the argument that the infusion of competition facilitates the promulgation of “fitter” actors and agents.

A challenge of this notion to the study of the evolution of human civilization (and social insects like ants and bees) is that there are other forces at work as well to ensure the survival of the hive, the colony, the village, the town, or the nation-state. We recall again the conclusions we drew from Paine’s thought experiment:

that effective governance structures emerged to ensure the survival of the community. Those who view competition with skepticism, or at least as a value-neutral construct, call for better understanding of how competitive ties influence other forms of administrative authority.

It should be noted that in most instances of social competition there exists a set of underlying rules that govern competitive behavior. These rules imply the consent of all competitors in order for fair competition to take place, whether these are the rules of engagement that dictate warfare, the rules of a competitive sport, or the rules and regulations that govern market transactions. Just as our exploration of the other forms of administrative authorities has suggested that there exist less than cut and dry distinctions between them, we also need to account for the propensity that competitive ties exist as a matter of degree.

Multiplex Ties

Drawing on the logics of capital resources exchange and principal-agent theory, Scheinert et al. (2015) set out to demonstrate the existence of multiplex ties. In this framework two types of capital resource exchange are measured: information sharing and financial resource exchange. In addition, traditional principal-agent ties are distinguished as reporting relationships. Co-equal ties are inferred when collaborations on common projects or programs are inferred. A survey of 200 plus organizations responsible for some facet of water quality management for a geographically explicit region was issued. The results showed the persistence of multiplex ties—ties between two nodes in the network through which more than one resource was exchanged and/or type of administrative or collaborative authority flowed.

These findings undergird what most network managers already know: that professional relations with others in network settings very often implies that a complex array of activities shape those relationships. In several studies of multiplex ties within water quality management (Scheinert et al., 2015) and food systems networks (Koliba, Wiltshire et al., 2016), information sharing ties are most abundant, followed by project and program collaboration, financial resource sharing, and reporting relationships. Another way to understand this structure is that the information sharing subnetworks of larger whole networks are the most dense and comprise the most actors. Exchanging information, particularly in the present digital age, is relatively cheap, while exchanging funding or entering into a formal hierarchical arrangement likely entails higher transaction costs.

When considering the types of ties that exist between two or more governance network actors, it is important to note that the type of tie (e.g., the sharing of information, funding, human capital, etc.), as well as the quality of the tie (e.g., formal or informal, weak to strong) matters. The complexity of how these ties are forged and maintained becomes a matter of concern for network managers.

Applications

Applications D and E draw on studies of governance networks that manage water quality and assist in the governance of a regional food system. Both of these studies highlight the complexity of multiplex ties that exist in each context. In both cases, network visualization is rendered using social network analysis techniques. A picture of governance networks as being comprised of many subnetworks that are predicated on different types of ties is provided.

APPLICATION D: THE SHAPE OF MULTIPLEX TIES IN WATER QUALITY MANAGEMENT NETWORKS

Scheinert, S., Koliba, C., Hurley, S., Coleman, S., and Zia, A. (2015). The shape of watershed governance: Locating the boundaries of multiplex networks. *Complexity, Governance & Networks*. DOI: 10.7564/15-CGN25.

Abstract

Governance networks are both nested and interconnected systems. Identifying internal boundaries within governance networks, such as those governance structures that influence and are influenced by large and diverse watersheds such as the Lake Champlain Basin, is necessary for differentiating between multiple functional subnetworks. Internal network boundaries exist between functional subnetworks when the networks have divergent structures. A qualitative case study of Lake Champlain Basin watershed governance networks identified several key overlapping subnetworks in which organizations interact in a variety of ways. An online survey of institutional actors was used to identify which actors were connected in five different functional subnetworks. Structural comparisons are made by analyzing the correlation between the subnetworks based on the quadratic assignment procedure (QAP) and network macrostructure. Results show that the information sharing, technical assistance, and project collaboration subnetworks formed one grouping, while the reporting and financial resource sharing subnetworks formed another grouping. The results demonstrated that this triangulated comparison was necessary to reach valid conclusions on the structural variation between the subnetworks on a multiplex network when subnetworks were structurally similar.

Methods

Network survey and analysis; QAP

The Lake Champlain Basin encompasses the northwestern portions of Vermont state, northeastern portions of New York state, and the lower reaches of Quebec province. The water quality of Lake Champlain is threatened by nonpoint sources of pollution that stem from a variety of land use practices, including residential and commercial development, stormwater management practices, water treatment facilities, roadways and other impervious surfaces, and agricultural practices. These nonpoint sources provide excessive run-off of nutrients (phosphorus and nitrogen) that flow from streams and rivers into the shallow bays of Lake Champlain, resulting in persistent summer blue-green algae blooms. The blooms present a public health threat and harm the region’s tourism and recreation industries. The U.S. Environmental Protection Agency (EPA) has imposed a total maximum daily load (TMDL) allocation requirement for the State of Vermont.

Scheinert et al. (2015) and Koliba et al. (2014) set out to study the governance networks that are mobilized to address the water quality threats posed by nonpoint source pollution in the basin. A 3D plane representation of the governance network is represented in Figure D.1 below.

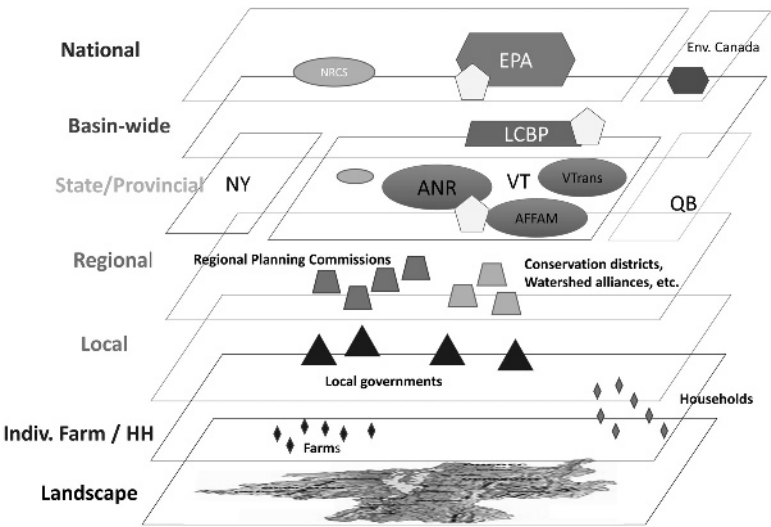


Figure D.1 Conceptual Model of a Water Quality Management Network Broken Down by Jurisdictional Level and Action Arena (Pentagon).

Figure D.1 provides a conceptual representation of the major actors involved in water quality management of surface waters for the Lake Champlain Basin. Bottom layer represents the biophysical environment (including hydrology and land use); second from the bottom represents land owners and land users. Local, regional, state/provincial, basin-wide and national levels are represented in subsequent layers.

An institutional network survey was employed by the research team to surface the underlying network structures. Network analysis techniques were used to generate a series of network graphs, one of which is presented below in Figure D.2.

The institutional network survey employed for this project asked respondents to record not only which other organizations they link to, but how they link to them. In other words, the types of ties were distinguished using the tie typology described in Chapter 4. Table D.1, below, provides a basic table of tie distribution across the whole network.

Some key findings and advances stemming from this study include:

- Analyzes data from a comprehensive institutional network survey of the water quality management network for two watersheds in the Lake Champlain Basin.
- Data is broken down into functional and geographic areas using concept mapping (see Figure D.1) and network graph (see Figure D.2).

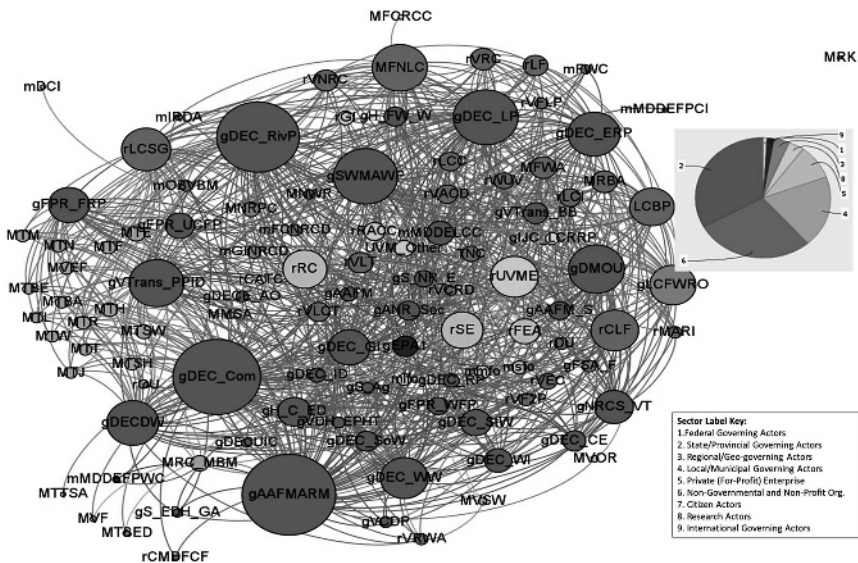


Figure D.2 Network Graph of Technical Assistance Provision Network for the Missisquoi Watershed (Rendered in Gephi).

Figure D.2 represents a network graph of the technical assistance provision network for the Missisquoi watershed. Size of node is proportional to the degree centrality—meaning the larger the node, the more central that node is to the network. This network is dominated by state actors. Graph represents all types of tie (information sharing, task coordination, financial resource sharing, and reporting structures).

Table D.1 Small World Coefficient Calculation (Using UCINet) for Subnetworks in the Water Quality Management Network

	Reporting	Project Coordination	Information Sharing	Financial Resource Sharing	Technical Assistance	Multiplex Network
Node Count	204	204	204	204	204	204
Density	0.041	0.080	0.117	0.050	0.090	0.130
Average Degree	8.10	16.19	23.74	9.94	18.19	26.47
Clustering Coefficient	0.606	0.581	0.611	0.603	0.566	0.614
Average Distance	2.196	2.112	1.985	2.133	2.068	1.954
Clustering Coefficient (Lattice)	0.643	0.700	0.717	0.667	0.706	0.720
Ave. Distance (Erdos-Renyi)	2.738	2.171	1.936	2.538	2.088	1.899
Clustering Ratio (Lattice)	0.94	0.83	0.85	0.90	0.80	0.85
Distance Ratio	1.25	1.03	0.98	1.19	1.01	0.97
Telesford Small World Coefficient	0.30	0.20	0.12	0.29	0.21	0.12

Table D.1 displays the breakdown of subnetworks for the whole water quality management network based on tie type. Basic network measures for distinguishing characteristics are provided. Information sharing network is identified as having the densest structure among the different tie types. Replicated with permission: Scheinert, S., Koliba, C., Hurley, S., Coleman, S., and Zia, A. (2015). The shape of watershed governance: Locating the boundaries of multiplex networks. *Complexity, Governance, & Networks*.

- Introduces methodology for describing and measuring subnetworks based on the type of tie—e.g., the type of capital resource following across it.
- Quadratic assignment procedure (QAP) is used to determine how sub-network tie structures cluster.
- Findings suggest how ties of similar authority structures tend to cluster together (e.g., principal-agent ties cluster with other principal-agent ties; co-equal ties cluster with other co-equal ties).

APPLICATION E: THE VALUE OF INFORMATION SHARING TIES TO A FOOD SYSTEMS PLANNING NETWORK

Koliba, C., Wiltshire, S., Scheinert, S., Turner, D., Zia, A.,
and Campbell, E. (2016). The critical role of information
sharing to the value proposition of a food systems network.
Public Management Review. DOI:
10.1080/14719037.2016.1209235

Abstract

With goal-directed networks being used so extensively as a strategy to achieve “collective impact,” increased attention is being paid to the investment of participating member organizations’ time, and informational, financial, and human capital in these efforts. Authors draw on the concept of “value proposition” from the business and public administration literature and use extensive network data from a food systems planning network to test hypotheses focusing on the positionality of member organizations within specific operational subnetworks by correlating positionality with multiple assessments of value. Results indicate that embeddedness in the information sharing subnetwork most strongly correlates with member value proposition.

Methods

Network survey and analysis; source document analysis

The joint coordination needed to bring food to people’s tables can be quite extensive. In recent decades, efforts have been undertaken by local and regional planners, policy makers, and policy entrepreneurs to better understand how this

joint coordination unfolds across the food system. The food system is conceived as a circular process of food production, distribution, and consumption. System inputs include soils, water, nutrients, and human capital. The development of food systems planning has infused the traditionally and exclusively market driven with more structured and focused effort to increase the robustness of local food systems. In this study, stakeholders in the State of Vermont have pursued the development of a “farm to plate” network as a strategy for building regional food system robustness and resilience.

The pursuit of network development as a conscious implementation strategy is increasingly being used to advance coordinated approaches to pursuing common goals. One such network was studied by Koliba, Wiltshire et al. (2016). Using a network survey that included a series of Likert scale questions relative to informant’s perceptions of network value and efficacy, the Vermont Farm to Plate (F2P) Network was analyzed. The F2P Network was originated in 2012 following the development of a strategic and comprehensive action plan designed to support and bolster the “food system” across the State of Vermont. The food system was conceived as encompassing agricultural inputs—such as soil and water availabilities, processes—such as farming practices, value added food products, and distribution channels, outputs—such as the number of jobs created and sustained, the volume of local food produced and consumed, and outcomes—broadly construed in terms of economic vibrancy, community health, etc.

Figure E.1 provides a visual representation of the governance of the F2P Network. Governance is provided by a steering committee (at the center) that, in turn, advises a series of working groups (inner circle) and cross cutting task forces (outer circle).

Koliba, Wiltshire et al. reproduced, graphically, the governance structure of F2P by coding the attendance of organizational representatives at meetings of the steering committee, working groups, and task forces. Figure E.2, below, provides a visual representation of the network graph resulting from this portion of the study.

An institutional network survey, similar in structure to the one employed by Scheinert et al. (2015), asked network members to identify who in the network they linked to. In this case, ties were distinguished between information sharing, project/program collaboration, and financial and human resource sharing—illustrating a second example of how multiplex ties can be studied and characterized in governance networks. Table E.1, below, illustrates how tie structures are correlated to the centrality of network actors broken down by sector.

We see from this data that nonprofit and government organizations played the most central roles in information sharing, while funders and governments played more central roles in resource sharing activities. This data demonstrates the ways in which sector characteristics of specific nodes (as described in Chapter 3) can be associated with specific types of network ties (as described in Chapter 4).

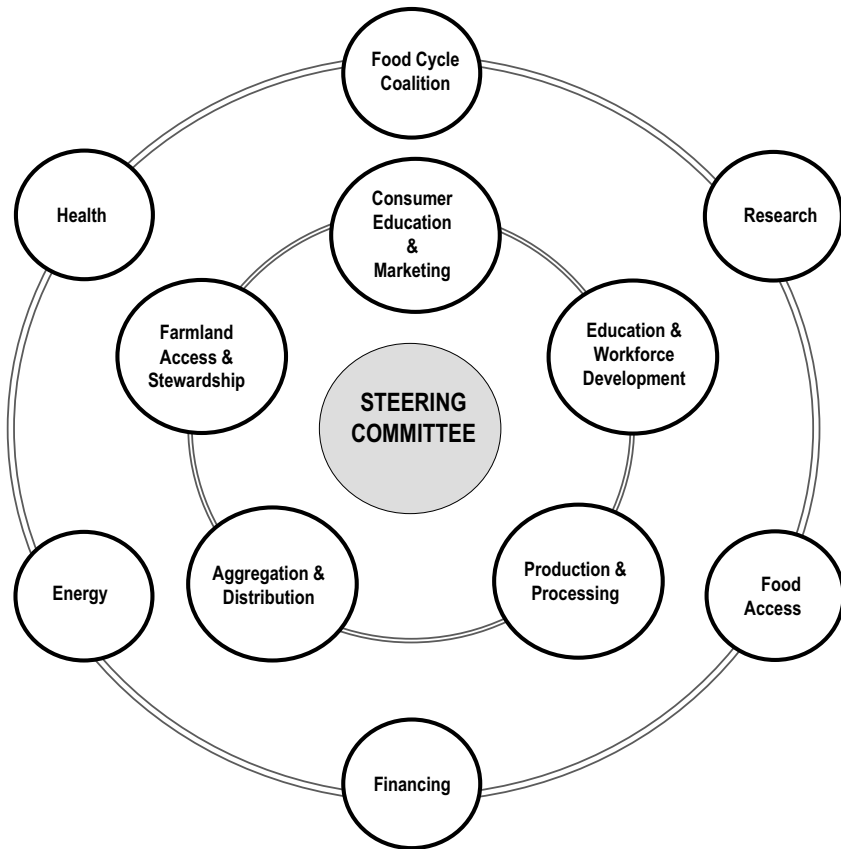


Figure E.1 Vermont Farm to Plate Network Structure.

Figure E.1 provides a visual representation of how the Vermont Farm to Plate Network governs itself. (Source: Farm to Plate Network, Retrieved 6/15/17: <http://www.vtfarmtoplate.com/uploads/F2P%20Network%20Structure%20and%20Purpose.pdf>)

Recognizing that the F2P Network is comprised of network members who participate voluntarily, the F2P backbone organization was interested in asking if the sectors of participating members mattered in their perception of the value of participation in the network. In other words, to sustain this network, how important is it that the whole network helps members advance a network member's own objectives? Table E.2, below, provides a summary of responses to a Likert scale question posed in the survey relative to the relationship between individual member goals and engagement in the F2P Network.

To examine the relationship between perceived value of being a member of the network and an organization's ties with others within the network, Koliba,

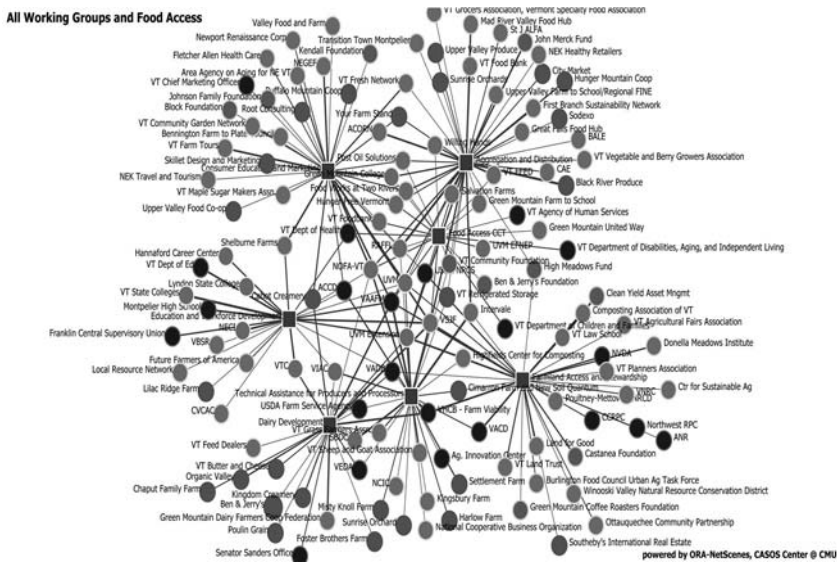


Figure E.2 Network Graph of the Farm to Plate Network’s Executive Committee and Taskforce Structure.

This figure was composed using meeting attendance lists for the major governing and program committees of the Farm to Plate Network. Large class nodes serve as hubs. Individual network members of each class node are represented. Key boundary spanning network actors can be found in the middle of the network graph. *Source:* Turner, L. (2013). *Making space for collaboration and change in Vermont's food system: Social network analysis of the farm to plate network* (Unpublished master's thesis), University of Vermont.

Wiltshire et al. (2016) tested to see how the location of the network member vis-à-vis the types of ties it forged was correlated to their level of perceived value of involvement in the network. In other words, they wanted to understand where they found value in the F2P Network. Table E.3, below, shows statistically significant p-values for information sharing as the signal of value. These findings were used to recommend to the F2P steering committee to ensure that the information sharing functions of the network be attended to.

Some key findings and advances stemming from this study include:

- A partnership network designed to promote and support the growth of the State of Vermont’s Food System was studied. The Farm to Plate Network (F2P) is coordinated by a network administrative organization and governed through an executive committee and a series of working groups and task forces (see Figure E.1).

Table E.1 Betweenness and Degree Centrality Measures by Sector and Tie Type

Sector	Information Sharing Centrality		Program/Project Collaboration Centrality		Resource Sharing Centrality	
	Betweenness	Degree	Betweenness	Degree	Betweenness	Degree
Government	*0.006	*0.127	*0.012	*0.074	*0.033	*0.048
For-Profit	0.002	0.062	0.005	0.033	0.008	0.022
Nonprofit	*0.006	*0.112	*0.009	0.053	0.011	0.029
Education	0.003	0.106	0.007	*0.056	0.008	0.026
Funder	0.001	0.083	0.005	0.035	*0.019	*0.037
Total Sample	0.004	0.096	0.008	0.049	0.013	0.029

This table displays degree and betweenness centrality scores by sector and type of tie for the Farm to Plate Network. This data shows the centrality of nonprofit and government network partners for the information sharing subnetwork and high degree centrality for government and funders in the financial resource sharing subnetwork. Modified from: Koliba, C., Wiltshire, S., Scheinert, S., Turner, D., Zia, A., and Campbell, E. (2016). The critical role of information sharing to the value proposition of a food systems network. *Public Management Review*.

Note: The two most central sectors in each subnetwork are marked with an asterisk.

- This study asks: What is the value that network members take from participating in this network? To what extent does a network member's sector matter in relation to its position within the network?
- Using an institutional network survey, the network structure of the Farm to Plate Network is described and analyzed. Subnetworks are broken down by type of network tie type and sector of participating actors (see Table E.1).
- Included in the survey instrument is an organizational self-assessment of the relative value that individual organizational involvement in the network has upon the goal attainment of the individual organization. Nonprofit, for-profit, and government network actors were most likely to express a high value proposition for their involvement in the F2P Network (see Tables E.2 and E.3).

Table E.2 Propensity to Assign Strong Agreement to Strong Disagreement to Question: “The Farm to Plate Network is Helping our Organization to Advance our Organization’s Own Goals”

Sector	Strongly Agree		Agree		Neutral		Disagree	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Government	4	40.0	5	50.0	1	10.0	0	0.0
For-Profit	5	35.7	7	50.0	2	14.3	0	0.0
Nonprofit	14	34.1	23	56.1	3	7.3	1	2.4
Education	0	0.0	7	58.3	4	33.3	1	8.3
Funder	0	0.0	5	83.3	0	0.0	1	16.7
Total Sample	23	27.7	47	56.6	10	12.0	3	3.6

This table shows the breakdown of the overall “value proposition” of a participating network member broken down by actor. For-profit, nonprofit and government agencies appear to find the most value to their involvement in the network. Modified from: Koliba, C., Wiltshire, S., Scheinert, S., Turner, D., Zia, A., and Campbell, E. (2016). The critical role of information sharing to the value proposition of a food systems network, *Public Management Review*.

Note: A fifth response, “Strongly Disagree,” was included on the survey. However, it is omitted here as no organization indicated that response.

Table E.3 Correlation Between Individual Network Actor’s Position in Specific Subnetwork Differentiated by Tie Type and Their Response to Question Posed in Table E.2

		Information Sharing Centrality		Program/ Project Collaboration Centrality		Resource Sharing Centrality	
		Betweenness	Degree	Betweenness	Degree	Betweenness	Degree
Mean Rank of Responses	‘Disagree’	11.33	10.67	51.67	34.17	36.50	29.00
	‘Neutral’	31.05	29.75	28.05	29.20	24.90	28.00
	‘Agree’	41.55	42.28	42.29	42.63	38.12	38.11
	‘Strongly Agree’	51.67	50.85	46.22	47.30	42.38	41.64
Test Statistics	Chi-square	10.64	10.77	4.54	4.29	4.59	3.11
	p-value	*0.014	*0.013	0.208	0.232	0.204	0.375

This table finds statistically significant p-values pertaining to an individual’s high degree and betweenness centrality in the information sharing subnetwork of F2P and their perceived value of involvement in the F2P Network. Modified from Koliba, C., Wiltshire, S., Scheinert, S., Turner, D., Zia, A., and Campbell, E. (2016). The critical role of information sharing to the value proposition of a food systems network. *Public Management Review*.

Note: Statistics are based on Kruskal Wallis H tests. Significance at the 0.05 level is marked with an asterisk. A fifth response, ‘Strongly Disagree,’ was included on the survey. However, it is omitted here as no organization indicated that response.

- An organization's position in the network is compared to perceived value of network participation.
- The value of a network actor's involvement is correlated to the actor's position in one of three different types of subnetwork based on tie characteristics.

Note

1 (1980).

Chapter 5

Network Level Functions

Conjunction junction, what's your function?
Hooking up two boxcars and making 'em run right.
Milk and honey, bread and butter, peas and rice.

—Bob Dorough¹

Throughout this book, we have described governance networks as undertaking coordinated action and resource exchanges to achieve certain policy ends—be it problem framing, policy creation, or policy implementation. This definition accounts for operational functions that get carried out within virtually any interorganizational network: coordinated actions and resource exchanges that exist as basic operational functions of any network. Governance networks are distinguished from other forms of interorganizational networks because they carry out policy functions. In this section, we distinguish between operational, policy stream, and policy domain functions found in governance networks.

The operational, policy stream, and policy domain functions of a governance network coexist with each other within governance networks. We assume that functions may exist in tandem with other functions, in much the same way that ties may be described in terms of their multiplexity. Instead of ascribing a single function to an entire network, for instance, deeming a governance network as being strictly “informational” (Agranoff, 2007) or “information sharing” (Milward and Provan, 2006), we suggest that information sharing may be one of many operational functions carried out within the governance network and that these functions are carried out through specific subnetworks defined by their ties. We also suggest that governance networks may undertake more than one policy function, and in some cases more than one policy domain function, by serving as the space through which policy streams couple (Kingdon, 1984).

Operating Functions

Although the classical debates in sociology regarding the relationship between the structures, functions, and roles of social organizations are too rich to explore in depth here (Collins, 1988), we will adopt a sociological perspective on social functions that assumes a link between social structures and social functions. Thus, the characteristics that particular network actors bring to their participation (Chapter 3), the nature of the ties built between them (Chapter 4), and the network-wide governance structures that combine, commingle, and sometimes compete within governance networks determine the kind of functions the network takes on. These factors help to shape which network actors take on particular functions, and which functions get more widely distributed across the network.

Discussions of the operating functions of organizations and groups have been taking place within the organizational development and management fields since Luther Gulick first introduced the POSDCORB framework in 1937. We present a few of the contemporary views of network-wide operational functions found within the public administration literature, making no allusion that the list of operative functions we discuss here is comprehensive. We focus on four types of operating function that have been found to dominate governance network structure: information sharing, task coordination and project collaboration, financial resource exchange, and hierarchical reporting functions. That most of these operational functions are similar to the types of resources that actors possess and the types of resources that flow across ties should be noted. There is a consistency here that is important.

Information Sharing

Information is one of the critical capital resources that flows across virtually any social network and has been found to be one of the most important (see Koliba, Wiltshire et al., 2016—Application E) and widespread (see Scheinert et al., 2015—Application D) types of activities found within governance networks. We may define *information* as “the organized data that has been arranged for better comprehension or understanding” (McNabb, 2007, p. 283). The flow of information within a governance network has been described as facilitating several other kinds of policy functions. Milward and Provan describe how information sharing contributes to the “shaping” of problems (Milward and Provan, 2006, p. 14). Information will likely serve as the chief function of networks taking on policy evaluation functions, an assertion borne out in studies of multiplex ties in governance networks (Scheinert et al., 2015; Koliba, Wiltshire et al., 2016). How information flows across a network plays a large role in how collective meaning and goals are established. In noting the role that information plays in social systems, Galbraith observes that “the greater the task uncertainty,

the greater the amount of information that must be processed” among network members (1977, p. 105). Information sharing in a network forms the basis for how coordination takes place, what roles network actors assume, and importantly, how network performance is measured. As Henry Mintzberg first observed in 1979, “mutual adjustment achieves the coordination of work by the simple process of information communication” (p. 3).

Information exchange takes place within governance networks, and serves as the possible basis around which a governance network interfaces with its external environment. Information sharing may serve not only as a critical function in a governance network’s internal processes, but also as an official goal of the network and one of its critical outputs. It is important to recognize that there are also instances of information withholding or strategic manipulation and framing of information that can occur within and across governance networks, while in Chapter 10 we discuss how one type of information, performance measures/indicators, serves as the currency around which network performance can be monitored and directed.

Studies of information sharing ties of water quality and food system networks have repeatedly shown that information sharing ties, and thereby information sharing functions, form the densest ties (Koliba et al., 2014; Scheinert et al., 2015; Koliba et al., 2016). The basic functions of sharing information about a wide range of subjects across email, face-to-face meetings, electronic and print newsletter and publications, and phone calls provide the core operational basis of governance networks. In essence, all governance networks will have at their core an information sharing subnetwork. The ubiquity of such ties provides a baseline from which to interpret more complex and higher stakes authoritative relationships (Scheinert et al., 2015; Koliba et al., 2016). In weak co-equal ties, the barriers to entry and exit are relatively low. The social contract that binds them together may be membership on a listserv, routine and non-routine information sharing during face-to-face and electronically mediated exchanges, or in the case of social media, adherence to the rules of the electronic platform, and the types of social norms and etiquette that tend to govern pure information sharing networks. The importance of information sharing and the weaker co-equal ties associated with them should be recognized, particularly in the context of the diffusion of innovation (Burt, 1997) and creating the basis of the “value proposition” in certain types of partnership networks (Koliba et al., 2016).

Task and Project Coordination

The second most dominant operational tie is task coordination and project collaboration (Scheinert et al., 2015; Koliba et al., 2016). At its basic form, coordinated action in any network may be described as a series of coordinated “mutual adjustments” (Mintzberg, 1979). Writing on the role of coordination

within a whole network context, Thompson viewed coordination thus: “the elements in the system are somehow brought into an alignment, considered and made to act together.” He in turn aligns coordination with governance, which he views as “the regulation of these elements; the effectiveness of their reproduction, of their alignment and coordination” (Thompson, 2003, p. 37).

Examining the range of activities undertaken by different kinds of governance networks, Robert Agranoff coded for at least nine different types of task coordination (2007, pp. 45–47). This work builds on an earlier study of local economic development networks in which Agranoff and his partner Michael McGuire coded for different types of public action that local governments and their partners used to coordinate activities (2003).

Strong co-equal ties within the context of governance networks can be found in explicit *project and programmatic collaboration*. Examples of such project and program collaboration can be found in the growing literature around “collective impact” (Kania and Kramer, 2011), the social learning processes found within “communities of practice” (Wenger, 1998), collaborative management (Agranoff and McGuire, 2004; O’Leary and Bingham, 2009), and the effective collaborative teaming literature (Gray, 1989). The normative grounds for complying with co-equals provides the basis for durable relationships among peers, partners, or collaborators.

Studies of multiplex ties of governance networks, undertaken in both water quality and food systems networks, have shown task and project coordination ties to be the second most dominant tie. In other words, task coordination functions appear to be the second most prominent operating functions of governance networks. Task coordination requires some measure of give and take that is marked by somewhat more collaborative ties than the usual more formalized and stronger ties that are found in information exchange.

Financial Resource Exchange

The ability to build and sustain collective action will, most often, require the allocation and utilization of financial resources. Within governance networks money is exchanged to reimburse for services and goods, and compensate for investment of human and physical capital. Networks may be forged around a network contract, grant, or MOU that stipulates how financial resources are allocated. Financial resources may flow into a network from outside, flow within and across the network itself, and/or be exported from the network in service of collective network goals. If information serves as the life blood of a network, money serves as one of the nutrients that keep the network going, without which network operations will either cease or operate purely on the volunteered labor and physical resources of network actors.

Generally, when money is exchanged or pooled, greater accountability measures are taken to formalize expectations and document the financial exchanges. Contracts are often forged under clear expectations of who is contributing what and how that contribution is to be accounted for. Thus, we may assume that in most instances, financial resource sharing ties are more formal and may, more often than not, involve a principal-agent relation. In other words, financial exchange is usually marked by the funder having authority over the fundee. When resources are pooled, as in the context of most public-private partnerships, this authority is levelled onto a more co-equal footing.

Reporting To and From

The final major operating function found across most governance networks is the existence of formal reporting functions, in which a clear principal can expect its agent or agents to have to comply with expectations laid down by the principal. These types of functions are standard features of hierarchical bureaucratic organizations. They are also evident in most grants and contract arrangements, in which financial resources are exchanged for the delivery of some service or good.

Reporting structures can couple with financial resource sharing to form even stronger principal-agent ties, in which the expectations of the principal (the funder) are reinforced through the decision to allocate or reallocate financial resources. Reporting functions may also exist in tandem with information sharing (for instance, in instances of mandatory reporting) and task coordination (when these tasks are mandated and directed by a principal).

Learning and Transferring Knowledge

Information sharing can lead to learning and knowledge transfer. Learning results “when experience and knowledge are consistently and extensively shared, valued, and promoted” (McNabb, 2007, p. 28). March and Olsen recognize that learning processes unfold within social systems in three integrated phases: “(1) Experimentation based on variation and risk taking; (2) Selection and inference from experiments based on socially constructed evaluations; and (3) Retention of learning in institutional rules and procedures that ensure a tacit, collective memory (March and Olsen, 1995, p. 199)” (Sorensen and Torfing, 2008, p. 105). In circumstances in which governance networks need to address complex, wicked problems that require extensive innovation and experimentation, the active promotion of learning and knowledge transfer serves as a critical operational function. Agranoff suggests ways in which capacity building is facilitated through “technical exchange” and mutual education (2007, p. 10).

Those who have advanced the notion of network learning within environmental management contexts have suggested a network's resilience is predicated on its capacity to learn. Network resilience is defined as "the capacity of a network to remain intact in its basic functions when subject to pressure or sudden change . . . therefore, a certain redundancy of both competencies and network relations makes networks less vulnerable, and, therefore, potentially more effective with regard to learning-related function" (Newig, Günther, and Pahl-Wostl, 2010, p. 29).

In Chapter 2, we discussed how governance networks are distinguished from other interorganizational networks because of the inherent policy functions that they take on. Although we feel safe in asserting that all interorganizational networks carry on the operating functions discussed earlier, governance networks are distinguished by the range of policy functions they take on.

Policy Stream Functions

In addition to the day-to-day routine operating functions inherent to resource exchange and pooling, governance networks can take on one or more explicitly related to the design and execution of public policies. Within the policy studies and policy analysis field, several conceptual models have been used to describe the creation, implementation, and monitoring of public policies. Process models include the classic policy cycle (Patton and Sawicki, 1986), institutional analysis and development (Ostrom, 2005), social construction and policy design (Ingram and Schneider, 1993), punctuated equilibrium theory (Baumgartner and Jones, 1993), and the advocacy coalition framework (Sabatier and Jenkins-Smith, 1993). We focus here on the policy stream model first proposed by Kingdon (1984). Jon Kingdon proposed that three streams (problem, policies/solutions, and politics) operating distinctly and in conjunction with one another provide another conceptual model of the policy process.

Unlike the classic policy cycle, Kingdon's policy stream model does not assume linearity or rational behavior on the part of policy actors. The problems, policies, and politics streams may couple, and in fact need to couple, for agendas to be set and policy windows to open. Kingdon (1984) recognizes that policy streams are created and directed through social networks and indirectly asserted that social networks form as a result of one stream, or some coupling of multiple streams. Kingdon recognizes that a number of policy actors, including interest groups, academia, media, and political parties, coordinate actions within and across the policy stream. Kingdon focuses on the coupling of policy streams leading to agenda setting and policy windows. He grounds the policy stream model in the coordinated actions that arise during the preenactment phases of policy selection and design.

To account for the postenactment of policy tools, Tony Bovaird builds on the policy stream model by combining some of the stages of the policy cycle with the characteristics of policy streams and differentiates between stages in the policy development and policy coordination process (2005). He also distinguishes between regulatory policy implementation and services policy implementation, and allows for policy evaluation and monitoring as a “stream” in the policy stream.

Referring to networks created to enact policies, Gage described “implementation networks” as “systems of actors from different organizations that have become involved in accomplishing a policy goal, a collective good, quite possibly for widely different reasons. Implementation networks typically have substructures for policy making” (Gage, 1990, p. 131). These networks tend to have a “less extensive, but more cohesive degree of functional integration.” Gage also observed that “it is likely to have a membership that has a higher degree of functional integration. For example, there will be close symbiotic relationships and members who have worked out guarded truces” (Gage, 1990, p. 131). We note here how networks predicated around the enactment of policies need to begin with the basic ties of coexistence.

We conclude that governance networks can be aligned with various layers of the policy stream. These streams may be understood in terms of the pre-enactment of public policies and the postenactment of public policies. Network configurations have been described in terms of the preenactment phases of the policy stream in the literature pertaining to iron triangles, issue networks (Hecl, 1978), policy subsystems (Baumgartner and Jones, 1993), advocacy coalitions (Sabatier and Jenkins-Smith, 1993), interest group coalitions (Hula, 1999), and policy networks (Rhodes, 1990). Postenactment network configurations have been described as third-party government (Salamon, 2002b), implementation networks (O’Toole, 1990), and public management networks (Milward and Provan, 2006; Frederickson and Frederickson, 2006; Agranoff, 2007). The selection and implementation of particular policy tools or suites of policy tools (Salamon, 2002b) play a central role in the organization of governance networks and their alignment within and across policy streams.

It may as well go without saying that networks carrying on particular policy functions or combinations of particular policy functions are more likely to rely on certain combinations of policy actors than others. The extent to which it is important to compare network configurations that appear over multiple policy streams ranging across the preenactment, enactment, and postenactment phases of policy development and implementation has yet to be fully explored within the literature.

Drawing particularly on Kingdon (1984) and Bovaird (2005), we discuss how each stream, phase, or facet of the policy process is distinguished. Figure 5.1

depicts the relationship between the phases of the policy process and the development of networks oriented to fulfilling these functions.

Defining and Framing Problems

Governance networks that exist to define or frame a public problem exist, at least in part, to bring a public problem into sharper focus or, in some cases, remove a particular policy problem from the public agenda. Examples of governance networks attempting to frame a public problem can be found in recent efforts of the scientific community to highlight the perils of global climate change (Zia and Koliba, 2011) in which a variety of interest group coalitions coalesced around the problem with the official goal of bringing global climate change onto the public agenda.

Within the literature, iron triangles, issue networks, and even intergovernmental networks have been described in terms of problem framing. Arguably, one of the only ways a public problem garners the attention of policy makers is through the collective actions of governance networks that have put pressure on or convinced or informed the perceptions of key decision makers. Other governance networks may exist to provide data, information, or new knowledge pertaining to public problems, as found in the many public-private partnerships and grant and contract agreements created to advance research and development.

Designing and Planning Policy

A simple definition of a public policy is that it is a solution to a problem (Stone, 2002). The design and enactment of a particular policy may be the official or

Problem Definition	• Networks are mobilized around aligned views of the scope, severity and causes of the problem
Policy Design and Planning	• Networks are mobilized to examine policy alternatives and/or plan for the implementation of policy tool or suite of tools
Policy Coordination	• Once policy tools or suite of tools is selected, networks may exist to coordinate the implementation of the policy
Policy Implementation (Regulatory)	• Networks are created on the basis of principal-regulator and agent-regulated relationships between actors
Policy Implementation (Service Delivery)	• Networks are mobilized around the delivery of some kind of public good or service
Policy Evaluation / Monitoring	• Networks are organized around the monitoring or evaluation of the implementation of policies
Political Alignment	• Networks are mobilized to advance a political agenda

Figure 5.1 Governance Network Relations to the Policy Stream.
(Adapted from Bovaird (2005)).

unofficial goal of a governance network. Kingdon (1984) first described how policy actors may align around the promotion of a particular policy solution. Interest group coalitions, iron triangles, and issue networks may advocate for the design and enactment of particular policy tools, waiting for policy windows to open through which they may couple the policy with a pressing public problem. We find this happening when certain neoconservative interest group coalitions pressed for the incorporation of school vouchers and the relaxation of certain labor laws during the reconstruction efforts following Hurricane Katrina (Farley et al., 2007). We find interests coalescing around the adoption or repeal of particular policy tools, ranging from environmental regulation to tax credit and loan guarantee programs. With the promotion (or repeal) of particular policy tools as their official goal, certain interest group coalitions and public-private partnerships may view the policy solution as one of their central outcome goals.

Governance networks may also be created to collectively design policy solutions. Without predetermined outcomes, public-private partnerships are created to undertake collaborative planning processes. Across the literature we find deliberative democratic forums, neighborhood planning processes, and other participatory planning processes undertaken by and through public-private partnerships.

Coordinating Policy

Public policies need to be coordinated. In some instances, as in the coordination of complex policy rollouts in which entire suites of policy tools are called for, governance networks may be created to coordinate implementation. David Frederickson and George Frederickson's studies of health care networks, such as the regulatory subsystems and grant and contract agreements found in Medicare/Medicaid and the grants programs of the Health Resources and Services Administration (2006), provide rich examples of governance networks aligned around the coordination of an array of policy tools.

Implementing Policy through Regulation

The policy implementation literature is rich with descriptions of governance networks (Hill and Hupe, 2002, p. 83) designed to either regulate or deliver public goods or services. We have already discussed the roles and functions that regulatory subsystems take in attempting to regulate the economic, environmental, or social behaviors of nongovernmental organizations. A substantial body of literature has focused on the relationship between governments and their regulated entities (Krause, 1997; Teske, 2004; Frederickson and Frederickson, 2006; Mills and Koliba, 2014). The principal-agent dynamics common in regulatory

subsystems, in which government regulators serve as principals wielding authority over regulated agents, have been marked by waves of reforms, swinging from eras of expansion of government's regulatory powers to eras of deregulation. Some of the critical considerations that arise in regulatory subsystems accounted for in our governance network model concern the extent to which information asymmetries and regulatory capture shape the structures of regulatory subsystem networks.

Implementing Policy through Service Delivery

A second form of policy implementation network can be defined as those that provide or deliver public or social goods and services. In service delivery networks, "government funds the service under contract but doesn't directly provide it; a fiscal agent, [usually the government] acts as the sole buyer of services" (Milward and Provan, 2006, p. 11).

There exists a substantial body of literature pertaining to contracting out and privatization movements discussing the roles that grants, contracts, and other enabling policy tools play in structuring the nature of these service delivery networks. The policy implementation literature dates back to Pressman and Wildavsky's (1973) initial study of the Oakland Redevelopment Program, and extends to Sabatier and Mazmanian's (1981) discussion of the roles that governments play in executing top-down control through the utilization of grants and contracts. Subsequently, the substantial literature pertaining to the role of contracts (Kelman, 2002; Cooper, 2003) and grants provides some very useful insights into the ways in which certain configurations of grant and contract agreements take on service delivery policy functions. Public-private partnerships are created to provide public goods and services, leveraging the resources of contributing public, private, and nonprofit organizations.

Evaluating Policy

Many configurations of governance networks form to evaluate policies. Interest group coalitions may undertake extensive evaluation of policies in efforts to provide greater transparency of government activities, mounting persuasive arguments to reframe public policies into problems. Public-private partnerships involving private or nonprofit research firms and universities may be created to study the impacts of public policies (Koontz et al., 2004). Federal entities such as the National Institutes of Health (NIH) and the National Science Foundation (NSF) (Frederickson and Frederickson, 2006) use grants and contract agreements to carry out evaluation of public policy impacts. These evaluative functions provide data to elected policy makers and those looking to influence them.

Bringing Political Alignment

The importance of politics and political alignments between policy actors in the framing of public policies, creating public policies, and implementing public policies has been the focus of much of the policy studies and implementation literature in recent decades. Political processes are often equated with negotiation and bargaining, trade-offs leading to compromises and concessions, and the sheer execution of power in efforts to control the outcome of public deliberations. We hope that it comes as an understatement at this point to conclude that governance networks of all forms exist, in part, due to the political alignments of policy actors.

Policy Domain Functions

In addition to the operational and policy functions, a governance network may be characterized by the types of policy domains that it functions within. A policy domain is defined here as the dominant field within which a governance network operates. These domains are associated with specific societal functions—delivering health care, public education, transportation infrastructure, etc. Policy domains are shaped by at least two factors: the coalescence of policy actors around a particular set of interests or concerns; and the very nature of the social needs or wicked problems that are said to encompass a given policy arena or domain. In other words, the domains that a governance network functions within get shaped simultaneously by the type of actors engaged in the collective action, and the characteristics of the policy domain itself.

Joop Koppenjan notes how it was Theodore Lowi who recognized the relationship between policy arena and multiactor configurations. “Lowi (1969), for instance, using the term arenas in this context, argued that depending on the nature and intensity of the conflict or the clash of interests between a set of actors, a specific configuration of actors or ‘arenas’ develops. Some arenas have a more pluralist (open) character; others tend towards a more elitist (exclusive) structure” (Koppenjan, 2008, p. 145).

Baumgartner and Jones (2002), building on a policy domain categorization scheme devised by the United State Office of Management and Budget (OMB), laid out one of the most comprehensive typologies for distinguishing between different policy domains that apply to the study of policy systems and governance networks. A list of these major policy domains is provided in Figure 5.2.

Baumgartner and Jones studied networks that they refer to as policy systems and subsystems (1993, 2002) within and across these domains. Space precludes a deeper exploration of the range of discrete functions taken on within any particular policy domain. We need to also recognize that some governance

networks carry out functions from more than a single policy domain. For example, some governance networks, like those engaged in regional planning efforts, will likely take on functions found within the community development, environmental management, transportation management, and even emergency management policy domains. One potential value that a governance network brings to social needs and wicked problems lies in its capacity to be a conduit for combining policy domains, policy streams, and operating functions.

There have been many seminal studies that have applied network metaphors and frames of analysis to the study of particular policy domains or the coupling of policy domains. Brint Milward and Keith Provan and their collaborators have studied how certain kinds of network configurations led to effective or ineffective delivery of mental health and social services (1998; 2006). Robert Agranoff and Michael McGuire's extensive research on local community development efforts has shed light on a range of characteristics common to governance networks within this policy domain (2003). Health care networks have been the focus of several studies (Frederickson and Frederickson, 2006; Rodriguez et al., 2007). Environmental management networks have been the focus of study as well (Koontz et al., 2004; Imperial, 2005; Lubell and Fulton, 2007). Louise Comfort (2007) and Niam Kapucu (2006a, 2006b) have applied network analysis to study response and recovery emergency management networks. Space precludes an in-depth overview of the wide range of policy domains in which networks have been described and evaluated. Entire volumes of examples of network governance operating with each of these domains may be found.

By allowing for governance network functions to be dictated by the specific goals ascribed to within each policy arena, a wide array of functions and subfunctions emerge. We may consider ways to label governance networks by the policy domain they function within, suggesting that we can speak of "environmental governance networks" or "health care governance networks."

Within each policy domain, any given governance network will take on more specific functions that are tied to specific goals or needs found within the domain.

Throughout this book at the end of particular chapters, summaries of some of the empirical studies and simulations undertaken by the co-authors are provided. Table 5.2 lays out all of the applications of governance network analysis woven throughout this book, the main policy domain and the specific main function of the networks being studied and featured in the Applications sections throughout the book.

Just as governance networks are spaces within which policy streams are coupled (Kingdon, 1984), they may also serve as spaces where multiple policy domains overlap or integrate. Some of our own research using the governance network frameworks described in this book has focused on governance networks that serve as spaces where policy domains overlap and are integrated. In some cases, the policy goals of specific domains may be in competition. Table 5.2 lists the

Table 5.1 Policy Domains of Baumgartner and Jones's (2002) Policy Agendas Project

1.	Macroeconomics
2.	Civil rights, minority issues, and civil liberties
3.	Health
4.	Agriculture
5.	Labor, employment, and immigration
6.	Education
7.	Environment
8.	Energy
9.	Transportation
10.	Law, crime, and family issues
11.	Social welfare
12.	Community development; housing issues
13.	Banking, finance, and domestic commerce
14.	Defense
15.	Space, science, technology, and communications
16.	Foreign trade
17.	International affairs and foreign aid
18.	Government operations
19.	Water management

Applications featured through this book. A review of the second column reveals a number of instances where policy domains overlap and in some cases integrate. For instance, emergency management networks are often charged with coordinating functions that span the policy domains of at least social welfare,

Table 5.2 Overview of Governance Network Analysis Applications, by Policy Domain Function

<i>Application/ Location in Book</i>	<i>Policy Domain/ Network Name (Table 5.1)</i>	<i>Chief Function of Network(s)</i>	<i>Network Mechanisms (Table 6.4)</i>	<i>Article Title</i>
App. A Chapter 3	Education; Agriculture Farm to School Networks	Many networks responsible for the supply, use, and consumption of whole and processed foods in public schools	Intergovernmental; Service Delivery; Partnership	Conner, D., King, B., Koliba, C., Trubek, A., and Kolodinsky, J. (2011). Mapping farm to school networks: Implications for research and practice. <i>Journal of Hunger & Environmental Nutrition</i> , 6, 133–152.
App. B Chapter 3	Energy Smart Grid Deployment Network	A network responsible for planning for, designing, resourcing, and deploying smart grid technology across a region	Partnership; Regulatory	Koliba, C., DeMenno, M., Brune, N., and Zia, A. (2014). The salience and complexity of building, regulating and governing the smart grid: Lessons from a statewide public-private partnership. <i>Energy Policy</i> . http://dx.doi.org/10.1016/j.enpol.2014.09.013
App. C Chapter 3	Environment; Agriculture; Civil Rights Harbour/Watershed Management Networks	Several networks responsible for water quality, land use, and ecosystem monitoring	Intergovernmental; Partnership; Regulatory	Kanwar, P., Koliba, C., Greenhalgh, S., and Bowden, W. B. (2015). An institutional analysis of the Kaipara Harbour governance network in New Zealand. <i>Society & Natural Resources</i> . DOI:10.1080/08941920. 2016.1144838

App. D Chapter 4	Water management; Environment; Agriculture; Transportation Water Quality Management Networks	Many networks responsible for water quality management regulations, programs, and projects	Intergovernmental; Regulatory; Service Delivery; Partnership	Scheinert, S., Koliba, C., Hurley, S., Coleman, S., and Zia, A. (2015). The shape of watershed governance: Locating the boundaries of multiplex networks. <i>Complexity, Governance & Networks</i> . DOI: 10.7564/15-CCGN25.
App. E Chapter 4	Agriculture; Community Development Food Systems Planning Network	A network responsible for coordinating support for a region's food system	Partnership; Advocacy; Service Delivery	Koliba, C., Wiltshire, S., Scheinert, S., Turner, D., Zia, A., and Campbell, E. (2016). The critical role of information sharing to the value proposition of a food systems network. <i>Public Management Review</i> . DOI: 10.1080/14719037. 2016.1209235
App. F Chapter 6	Environment; Community Development Metropolitan Environmental Stewardship Networks	Two networks of organizations sharing a common purpose around environmental stewardship with specific metropolitan regions	Partnership; Advocacy; Service Delivery; Regulatory	Romolini, M., Grove, M., Ventriss, C., Koliba, C., and Krmkowski, D. (2016). Towards an understanding of citywide urban environmental governance: An examination of stewardship networks in Baltimore and Seattle. <i>Environmental Management</i> . DOI: 10.1007/s00267- 016-0704-4

Table 5.2 Overview of Governance Network Analysis Applications, by Policy Domain Function (continued)

<i>Application/ Location in Book</i>	<i>Policy Domain/ Network Name (Table 5.1)</i>	<i>Chief Function of Network(s)</i>	<i>Network Mechanisms (Table 6.4)</i>	<i>Article Title</i>
App. G Chapter 6	Water Management; Environment; Agriculture; Transportation Planned Water Quality Management Networks	Two networks of organizations spanning public, private, and nonprofit sectors and geographical jurisdictions responsible for executing clean water policy	Intergovernmental; Regulatory; Service Delivery; Partnership	Koliba, C., Reynolds, A., Zia, A., and Scheinert, S. (2015). Isomorphic properties of network governance: Comparing two watershed governance initiatives in the Lake Champlain Basin using institutional network analysis. <i>Complexity, Governance & Networks</i> , 1(2), 99– 118. DOI: 10.7564/14-CGN12
App. H Chapter 7	Water Management Metropolitan Water Management Networks	Overlapping and discrete networks operating to manage stormwater, drinking, irrigation, and wastewater within a given metropolitan region	Intergovernmental; Service Delivery	Meek, J. W., and Marshall, K. S. (2017). Cultivating resiliency through system shock: The Southern California metropolitan water system as a complex adaptive system. <i>Public Management Review</i> . http://www.tandfonline.com/doi/full/10.1080/14719037.2017.1364408
App. I Chapter 7	Transportation Transportation Project Prioritization Network	A network responsible for planning, prioritizing, and resourcing state roadway projects	Intergovernmental; Service Delivery	Zia, A., and Koliba, C. (2013). The emergence of attractors under multi- level institutional designs: Agent- based modeling of intergovernmental decision making for funding transportation projects. <i>Artificial Intelligence (AI) & Society</i> . DOI: 10.1007/s00146-013-0527-2

App. J Chapter 8	Social Welfare; Community Development; Environment Urban Regeneration Networks	Networks of nonprofits, governance offices, and local businesses work together to promote improvements in quality of life for urban residents	Partnership; Advocacy	Murphy, J., Rhodes, M. L., Meek, J. W., and Denyer, D. (2016). Managing the entanglement: Complexity leadership in public sector systems. <i>Public Administration Review</i> . DOI: 10.1111/puar.12698
App. K Chapter 8	Education Public Education Networks	Many networks of small groups working collaboratively to discuss, decide, action, and evaluate teaching practices and policies	Intergovernmental; Service Delivery	Gajda (Woodland), R., and Koliba, C. (2007). Evaluating the imperative of intra-organizational collaboration: A school improvement perspective. <i>American Journal of Evaluation</i> , 28(1), 26–44.
App. L Chapter 9	Social Welfare; Environment; (other) Emergency Management Networks	A network responsible for the response and recovery phases following a large-scale natural disaster	Intergovernmental; Service Delivery; Regulatory	Koliba, C., Mills, R., and Zia, A. (2011). Accountability in governance networks: Implications drawn from studies of response and recovery efforts following Hurricane Katrina. <i>Public Administration Review</i> , 71(2), 210–220.

Table 5.2 Overview of Governance Network Analysis Applications, by Policy Domain Function (continued)

<i>Application/ Location in Book</i>	<i>Policy Domain/ Network Name (Table 5.1)</i>	<i>Chief Function of Network(s)</i>	<i>Network Mechanisms (Table 6.4)</i>	<i>Article Title</i>
App. M Chapter 9	Energy Offshore Drilling Regulation Network	A network of industry and government actors responsible for the safe and secure extraction of oil within offshore facilities	Regulatory	Mills, R., and Koliba, C. (2014). The challenge of accountability in complex regulatory networks: The case of the Deepwater Horizon oil spill. <i>Regulation & Governance</i> . DOI:10.1111/rego.12062
App. N Chapter 9	Transportation Airline Safety Networks	The networks of airline managers, labor, and government regulators responsible for ensuring airplane safety	Regulatory; Partnership	Mills, R., Koliba, C., and Reiss, D. (2016). Ensuring compliance from 35,000 feet: Accountability and trade-offs in aviation safety regulatory networks. <i>Administration & Society</i> . 0095399716656223.
App. O Chapter 9	Government Operations; Social Welfare; International Affairs Anti-Terrorist and Security Networks	The networks of tribes and international militaries responsible for ensuring peace and stability within tribal regions	Intergovernmental; Partnership	Zia, A., and Hameed, K. (2014). Politics of conflict in Pakistan's tribal areas: Vulnerability reduction in violence-prone complex adaptive systems. In M. M. Aman and M. J. Parker Aman (Eds.), <i>Middle East conflicts and reforms</i> (pp. 223–236). Washington, DC: Policy Studies Organization/Westphalia Press.

App. P Chapter 10	Transportation Traffic Congestion Performance Management Networks	Comparison of networks responsible for collecting and using performance data to manage metropolitan traffic congestion	Intergovernmental; Regulatory; Service Delivery	Koliba, C., Campbell, E., and Zia, A. (2011). Performance measurement considerations in congestion management networks: Evidence from four cases. <i>Public Performance Management Review</i> , 34(4), 520–548.
App. Q Chapter 10	Transportation Metropolitan Transportation Planning Networks	Regional networks anchored by metropolitan planning organizations (MPOs) responsible for coordination of transportation system functions	Intergovernmental; Regulatory; Service Delivery	Zia, A., Koliba, C., Meek, J., and Schulz, A. (2015). Scale and intensity of collaboration as determinants of performance management gaps in polycentric governance networks: Evidence from a national survey of MPOs. <i>Policy & Politics</i> , 43(3), 367–390. http://dx.doi.org/10.1332/030557315X14352341137386
App. R Chapter 10	Environment; International Affairs Global Climate Change Mitigation Planning Networks	Global networks of nations and nongovernmental actors responsible for negotiating and enforcing carbon emission controls	Intergovernmental; Advocacy; Regulatory; Partnership	Zia, A., and Koliba, C. (2011). Accountable climate governance: Dilemmas of performance management across complex governance networks. <i>Journal of Comparative Policy Analysis</i> , 13(5), 479–497.

environment, and government operations, and likely includes virtually all of the policy domains listed in Table 5.1 (see Application L). Although water management lies at the heart of water quality management networks, successful water quality plans will likely draw in environment, agriculture, and transportation domains (see Application D and G).

Defining Functions: Imperatives and Challenges

A functionalist perspective on governance networks holds the view that as a social system, the functions of governance and policy taken on by and through governance networks are carried out to provide for group survival, social health, safety and well being, economic advancement and/or environmental stewardship (Chilcott, 1998). Understanding the functions of a particular governance network becomes critical for assessing accountability and performance. It is also critical for those looking to employ network development as a strategy and for those looking to determine how much time, energy, and financial resources to invest in network building. The conclusion that we draw in this chapter, that we need to view network functions in a multifaceted manner, may not be particularly satisfying for some. In the empirical studies we have undertaken that are found in examples throughout the book, we find the question of network functionality as inherently context driven. Functions change and evolve. In some instances, two or more functions are at odds with one another.

The relationship between functions and structures is yet another one of those teleological challenges facing those looking to study, govern, and manage governance networks. In the next chapter we explore some of the drivers of network structures and some of the ideal types of network governance found in the literature and empirically observed. We discuss a series of network mechanisms that will appear to blur the line between structure and function. For instance, a regulatory relationship is shaped by a regulation that defines principals and agents. The function of the principals in this structure is to regulate the behaviors and actions of others. The regulation itself provides structure to this relationship, but it also defines the function of this relationship. The same can be said for grant and contractual relationships. Structures and functions need to be understood in an integrated taxonomy.

Note

- 1 *Schoolhouse Rock* (1973).

Chapter 6

Network Level Structures

Form follows function—that has been misunderstood. Form and function should be one, joined in a spiritual union.

—Frank Lloyd Wright¹

There is a longstanding debate within sociology regarding the relationship between form and function. Adopting a systems view, we see the relationship between the range of functions outlined in Chapter 5 and the kind of structural characteristics raised in this chapter as being indelibly linked. Determining whether functions lead to structures or structures lead to functions is a matter that is highly contextual and likely contingent on the life cycle of the network (Raab, Mannak, and Cambré, 2013). Governance networks may be catalyzed around the goals of fulfilling certain functions. These functions, in turn, help determine network structure. Governance networks may also emerge out of existing network structures, with functions arising from the collective decisions made by network actors operating out of these structures. For our purposes, we skirt the “chicken or egg” question and simply offer this discussion of network-wide structure as yet another set of characteristics around which governance networks may be described.

In this chapter we consider the kinds of network-wide structures that can be found within governance networks of various configurations. We begin with a discussion of the roles that “policy tools” play in structuring network arrangements. We build on the policy tools framework first introduced by Lester Salamon and his associates and the links they draw between the selection and use of policy tools and the inherent network structures that arise as a result. We then explore Keith Provan and Patrick Kenis’s network governance model,

suggesting that their model is a useful starting point around which to describe macro-level, network-wide structures. We conclude the chapter with a look at five different kinds of governance network configurations: intergovernmental relations, interest group coalitions, regulatory subsystems, grant and contract agreements, and public-private partnerships.

Policy Tools

In laying out a framework for interpreting the place of policy tools in relation to contemporary public administration and policy frameworks, Michael Howlett observes that policy tools or instruments “are techniques of governance that, one way or another, involve the utilization of state authority or its conscious limitation” (Howlett, 2005, p. 31). The origins of the policy tool frameworks have been traced back to the work of Lowi (1969) (Landry and Varone, 2005, p. 107). Different, but compatible policy tool typologies have been introduced by Hood (1984), McDonnell and Elmore (1987), and Doern and Phidd (1992). Lester Salamon has been one of the chief proponents of a new governance framework that provides a focused study of the policy tool as a unit of analysis (2002a, b). He and his colleagues assert that the increasing uses of indirect policy tools have contributed greatly to the proliferation of governance networks. Salamon describes how policy tools structure the interactions of actors within a governance network. Policy tools may also be understood as “boundary objects” (Wenger, 1998) that serve to help structure the flow of resources and services, and with which actors are mobilized and participate. According to Salamon, “a [policy] tool or instrument of public action can be defined as an identifiable method through which collective action is structured to address a public problem” (Salamon, 2002b, p. 19). Policy tools structure action. Table 6.1 illustrates the relation of the policy tool to the policy stream. Although many different typologies of policy tool types have been introduced,² the policy tool typology presented in Salamon et al.’s (2002c) *The Tools of Government: A Guide to the New Governance* provides the most extensive overview of policy tool definitions and characteristics to date.

The selection of particular policy tools can become the intended outcome of a governance network. Networks that exist in the preenactment phases of the policy stream (described within the literature as iron triangles, issue networks, and interest group coalitions) function to influence the selection and design of particular policy tools, contributing to the “politics of structure” (Wise, 1994) that has historically marked intersectoral relations (see Chapter 2 for a discussion of this phenomenon). Noting the relationship between policy tool selection and design and political alignment, Salamon observes that “tools often take on an ideological coloration that makes them attractive on *a priori* grounds regardless of their fit with the problem to be solved” (Salamon, 2002c, p. 602). Thus, the

selection and design of particular policy tools may serve as the desired outcome of a particular governance network. The selection of the policy tool becomes “a central part of the political battle that shapes public programs. What is at stake in these battles is not simply the most efficient way to solve a particular problem, but also the relative influence that various affected interests will have in shaping the program’s post-enactment evolution” (Salamon, 2002b, p. 11). Table 6.2 provides a basic listing of policy tools as laid out by Lester Salamon and his colleagues and summarizes some of the major assertions they make regarding tool properties.

Policy tools can serve as a critical input into a governance network, structuring how authority and resources flow through it. “Tools importantly structure the post-enactment process of policy definition by specifying the network of actors that will play important roles and the nature of the roles they will perform” (Salamon, 2002b, p. 18). Speaking of the policy tool’s function as an input factor, Salamon observes that the “choice of tool helps determine how discretion will be used” and authority carried out (2002b, p. 18). Postenactment (e.g., after a policy tool is selected and allocated sufficient resources), policy tools will structure how authority gets distributed across a governance network and, in some cases, how resources get distributed.

Table 6.1 Relation of Policy Tool to Policy Stream

<i>Stage of Enactment</i>	<i>Place in the Policy Stream</i>	<i>Policy Tool as Input or Outcome</i>
Preenactment	Problem definition	Policy tools are viewed as problems/contribute to problems (input)
	Policy design	Policy tool is the design (output)
Postenactment	Policy coordination	Policy tool structures network (input)
	Regulation	Regulation structures network (input)
	Service delivery	Service grants and contracts structure network (input)
	Policy evaluation	Policy tool is the subject of an evaluation (output)
Pre- and postenactment	Political alignment	Policy tool enactment (or nonenactment) is output

Policy tools possess certain characteristics that play a part in how they impact the mobilization, composition, and function of a governance network. Some tools are more coercive than others. "Coercion measures the extent to which a tool restricts individual or group behavior as opposed to merely encouraging or discouraging it" (Salamon, 2002b, p. 25). Most forms of regulation, for instance, are viewed as coercive by the regulated agent. To avoid having to force compliance, governments have moved toward more voluntary forms of compliance and self-regulation. Other tools, such as grants and contracts, call for contracted agents to voluntarily enter into a principal-agent relationship with the government. Within these relationships, there is a clear remunerative quality to the relationship. Still other policy tools facilitate noncoercive relationships, such as vouchers, in which individual citizens are given latitude in where to spend the voucher, and public information, in which governments may partner with educational or media outlets to provide public service announcements. Howlett discusses the relationship between tool selection and the degree of compulsion inherent to the tools, suggesting another way of thinking about tools and coercion (2005).

Another characteristic of a policy tool concerns the degree of automaticity that is required to implement the tools. Some policy tools draw on an existing infrastructure to be implemented. "Automaticity measures the extent to which a tool utilizes an existing administrative structure to produce its effect rather than having to create its own special administrative apparatus" (Salamon, 2002c, p. 32). In some cases, such as loan guarantees, governments work with the banking industry to execute guaranteed loan programs. Some forms of social regulation, such as new criminal laws, may be difficult to enforce because the infrastructure to arrest or prosecute offenders is not robust enough. It should be noted as well that the existence of an infrastructure to implement a given policy tool may be the impetus for mobilizing a governance network.

The visibility of a policy tool is a third characteristic that structures collective action. Salamon and his colleagues view visibility chiefly in terms of the manifestation of the costs associated with the policy tools within a public budget (2002a). "Visibility measures the extent to which the resources devoted to a tool show up in the normal government budgeting and policy review process" (Salamon, 2002c, p. 35). Visibility may also be construed in terms of public awareness of the existence of the policy tool. Visibility within a budget may be helpful for providing network actors with insights into the extent of the financial resources that are being devoted to implementation, while the visibility of the policy tool in terms of public awareness may have a bearing on which actors get mobilized, as in the case of the release of a request for proposals, or the visibility of a competitive bidding process.

Anne Schneider and Helen Ingram (1990) make some important observations about policy tools and behavioral assumptions. Building on the basic premise of

Table 6.2 Policy Tool Definitions

<i>Government Tools</i>	<i>Definition</i>	<i>Extent of Directness</i>	<i>Level of Coercion</i>	<i>Degree of Automaticity</i>	<i>Degree of Visibility</i>
<i>Economic Regulation</i>	"Specialized bureaucratic process that combines aspects of both courts and legislature to control prices, output and/or entry and exit of firms in an industry." (Salamon, 2002c, p. 117)	Mixed "Direct in that regulatory agencies control entry, set prices and fine anyone who violates rules." "Indirect in that, within the limits established by regulatory rules, production and consumption decisions are made by participants in regulated markets, not by the government." (Salamon, 2002c, p. 120)	High "Economic regulation is highly coercive in that firms may not participate in regulated markets unless licensed to do so by the regulator, and can be fined or have their licenses canceled if they do not comply with the rules." (Salamon, 2002c, p. 119)	Low "Economic regulation usually ranks low in terms of automaticity in that economic regulation substitutes administrative decisions about prices, entry, and output for the decisions that would be made in an unregulated market." (Salamon, 2002c, p. 120)	Mixed "Economic regulation has a mixed ranking on this dimension because it is highly visible to those who are most affected by it, but largely invisible to most citizens." (Salamon, 2002c, p. 120)
<i>Social Regulation</i>	"Social regulation is aimed at restricting behaviors that directly threaten public health, safety, welfare, or well-being." (May, 2002, p. 157)	Low "Social regulation requires direct intervention on the part of government at the stage of adoption in order to specify rules or to establish intergovernmental mandates." "Yet, particularly as practiced in the United States, social regulation turns out to be a surprising indirect tool of government." (May, 2002, p. 160)	High "The use of sanctions and enforcement in compelling compliance with rules makes social regulation inherently coercive." (May, 2002, p. 159)	Low "Very few social regulations are automatically obtained or self-enforcing in the sense that compliance is automatically obtained." (May, 2002, p. 160)	Low "Social regulations are relatively invisible tools of government." (May, 2002, p. 160)

Table 6.2 Policy Tool Definitions (continued)

<i>Government Tools</i>	<i>Definition</i>	<i>Extent of Directness</i>	<i>Level of Coercion</i>	<i>Degree of Automaticity</i>	<i>Degree of Visibility</i>
<i>Government Insurance</i>	<p>"A tool through which governments agree to compensate individuals or firms for losses from certain specified events. Eligible recipients are usually charged a fee, or premium, for participation in the program." (Feldman, 2002, p. 187)</p>	<p>Mixed "In directly run insurance programs, the authorizing government designs the program in some detail and retains the powers that determine the exposure of the government to loss." However, "these types of government insurance program, such as crop insurance in the United States, are fairly indirect and are akin to tools such as grants." (Feldman, 2002, p. 189)</p>	<p>Mixed "Government insurance programs use both rewards and punishments and therefore rank in the midrange in terms of coerciveness." (Feldman, 2002, p. 189)</p>	<p>Mixed "The automaticity of government insurance programs, like their degree of directness, varies with the type of program." "The more direct programs require the establishments of a government apparatus to design and implement the tool. On the other hand, those that rely heavily on private insurance agents and insurance adjusters to deliver the governmental service have a higher automaticity similar to loan guarantees." (Feldman, 2002, p. 189)</p>	<p>Low "Insurance is one of the least visible of policy tools, and public budgets have much to do with that situation." (Feldman, 2002, p. 190)</p>

<i>Public Information</i>	<p>"Policymakers seek to inform an audience of target actors about an issue or pattern of behavior to influence what people think, know, or believe when they engage in the target behavior." (Weiss, 2002, p. 218)</p>	<p>Mixed "They may be classic direct interventions, as when government officials inform citizens what they are supposed to do." However, "Information may also be indirect." (Weiss, 2002, p. 219)</p>	<p>Mixed Some people think that "information is the softest and most lenient instrument in the government tool-kit." While others think "government intervention in shaping the information available to citizens weakens and distorts the flow of ideas and discussion necessary for a free society." (Weiss, 2002, pp. 220–221)</p>	<p>Low "However, information policies seldom work automatically." (Weiss, 2002, p. 220)</p>	<p>Mixed "The visibility of information interventions varies substantially." "Public information campaigns are highly public and visible efforts by government officials to attract attention to the public good in order to influence behavior." "Much of the time information interventions are less visible." (Weiss, 2002, p. 220)</p>
<i>Corrective Taxes, Charge, Tradable Permits</i>	<p>Tools that "involve using prices and other market mechanisms to create financial incentives to change their behavior in ways that reduce social harms or secure benefits for society at large." (Cordes, 2002, p. 256)</p>	<p>Mixed "This class of policy tools is also less direct than the tool of social regulation, although somewhat more direct than subsidies." (Cordes, 2002, p. 257)</p>	<p>Low "Corrective taxes, charges, and permit trading are policy tools that rank moderately low in terms of coerciveness." (Cordes, 2002, p. 257)</p>	<p>High "Corrective taxes, charges, and permit trading rank moderately high in terms of being automatic." (Cordes, 2002, p. 258)</p>	<p>High "Taxes and charges and permit schemes are rather visible policy tools." (Cordes, 2002, p. 258)</p>

Table 6.2 Policy Tool Definitions (continued)

<i>Government Tools</i>	<i>Definition</i>	<i>Extent of Directness</i>	<i>Level of Coercion</i>	<i>Degree of Automaticity</i>	<i>Degree of Visibility</i>
<i>Procurement Contracts</i>	<p>"A business arrangement between the government and a private for-profit or not-for-profit entity in which the private entity promises, in exchange for money, to deliver certain products or services to the government agency or to others on the government's behalf." (Kelman, 2002, p. 282)</p>	<p>Mixed "On the directness scale, compared with other tools, contracting is ranked in the medium category." "In one sense, contracting is less direct, since it leaves production in private hands." "However, in a number of important ways, contracting may be a more direct tool of government action than many other tools." (Kelman, 2002, p. 283)</p>	<p>Mixed "Contracting ranks in the medium category compared with other tools." "Contracts are more restrictive than tools such as public information, grants, and vouchers, but are less restrictive than tools such as corrective taxes and regulation." (Kelman, 2002, p. 284)</p>	<p>Mixed "On the automaticity scale, contracting is ranked in the medium category." "If there are suppliers who sell their products or services to the commercial marketplace independent of the government requirements, contracting can effectively use the existing market structure." "Contracting is less automatic when there is no nongovernmental market for what the government is buying." (Kelman, 2002, p. 284)</p>	<p>High "Compared with the other tools discussed in this book, contracting falls into the relatively high-visibility category." (Kelman, 2002, p. 284)</p>

<i>Purchase-of-Service Contracts</i>	<p>"Involves agreements under which a government agency enlists a private organization to deliver a service to an eligible group of 'clients' (third party) in exchange for money." (DeHoog and Salamon, 2002, p. 320)</p>	<p>Low "POS contracting is a fundamentally indirect tool of public action, relying on nongovernmental actors to deliver publicly financed services to eligible citizens on the government's behalf." (DeHoog and Salamon, 2002, p. 321)</p>	<p>Low "POS contracting essentially offers a reward in the form of a money payment for the provision of a service by a private vendor to a designated client. As such, it is a generally noncoercive tool." (DeHoog and Salamon, 2002, p. 322)</p>	<p>High "Because it relies on marketlike relationships, POS contracting is also a relatively automatic tool." (DeHoog and Salamon, 2002, p. 321)</p>	<p>High "Programs embodying contracting are typically on-budget expenditures and therefore highly visible in the normal budget process." "Contracts are often publicly announced and may even require approval by local elected officials." (DeHoog and Salamon, 2002, p. 322)</p>
<i>Grants</i>	<p>"Payments from a donor government to a recipient organization (typically public or nonprofit) or an individual." (Beam and Conlan, 2002, p. 341)</p>	<p>Low "Grants are perhaps the principal indirect tool of government action." (Beam and Conlan, 2002, p. 342)</p>	<p>Low "Generally speaking, grants are noncoercive in this sense. They are intended to encourage a recipient to take a certain action, not to restrict the action." (Beam and Conlan, 2002, p. 343)</p>	<p>High "From the point of view of the granting government, grants rank fairly high in terms of automaticity since they essentially involve relying on the administrative systems of other entities to carry out particular functions." (Beam and Conlan, 2002, p. 343)</p>	<p>High "Generally speaking, grants are noncoercive in this sense." "However, grants must also be judged as more coercive now than they once were." (Beam and Conlan, 2002, p. 343)</p>

Table 6.2 Policy Tool Definitions (continued)

<i>Government Tools</i>	<i>Definition</i>	<i>Extent of Directness</i>	<i>Level of Coercion</i>	<i>Degree of Automaticity</i>	<i>Degree of Visibility</i>
<i>Loans and Loan Guarantees</i>	Credit is provided "as a way to encourage funding for borrowers or activities that are considered important, either politically or economically." "Government makes a direct loan when it borrows from Treasury to lend money; when the government guarantees a loan, a private lender makes the loan to the borrower." (Stanton, 2002, p. 381)	Mixed "The direct loan and the guaranteed loan are different from one another in the extent to which they use third parties to make loans, service them, and collect on defaults. As tools of government, direct loans tend to be more direct than guaranteed loans." (Stanton, 2002, p. 382) Guaranteed loan programs are low in directness. Direct loan programs go from medium to high.	Mixed The distribution of loans and loan guarantees requires little coercion, but getting timely and full payments requires a medium level of coercion.	Low Loan guarantees tend to be more automatic than direct loans. "Guaranteed loans rank high in automaticity, and many direct loans rank low." (Stanton, 2002, p. 381)	High The 1990 Credit Reform Act made both loans and loan guarantees visible in the government's budget process. The act recognizes that a loan's true cost is not captured by its cash flow in any one year; the true cost is the net value of its cash flows to the government over the life of the loan.

Tax Expenditures	<p>"A tax expenditure is a provision in tax law that usually encourages certain behavior by individuals or corporations by deferring, reducing, or eliminating their tax obligation." (Howard, p. 2002, p. 411)</p>	<p>Low "Tax expenditures are highly indirect. For the most part, the government uses tax expenditures to encourage individuals and corporations to buy homes, health insurance policies, heavy equipment, and the like from other individuals and corporations." (Howard, 2002, p. 413)</p>	<p>Low "Tax expenditures appeal to many policymakers because they appear to entail little coercion." (Howard, 2002, p. 412)</p>	<p>High "Tax expenditures are in theory highly automatic." (Howard, 2002, p. 413)</p>	<p>High "Although such comparisons are subjective, it seems reasonable to conclude that tax expenditures are now more visible than loan guarantees and insurance and considerably less visible than regulations, grants, and direct government." (Howard, 2002, p. 414)</p>
Vouchers	<p>"A voucher is a subsidy that grants limited purchasing power to an individual to choose among a restricted set of goods and services." (Steuerle and Twombly, 2002, p. 446)</p>	<p>Low "Vouchers generally display a minimal degree of directness when compared with other policy tools, although variation exists across programs." (Steuerle and Twombly, 2002, p. 446)</p>	<p>High "Vouchers are moderately coercive with respect to the consumption of goods and services because vouchers both prescribe and proscribe." (Steuerle and Twombly, 2002, p. 447)</p>	<p>High "Although generalization is difficult, vouchers provide a high level of automaticity relative to many other policy tools. This is so because vouchers essentially rely on the existing private market to supply the goods and services being subsidized and essentially provide beneficiaries a chit to use for purchases in this market." (Steuerle and Twombly, 2002, p. 447)</p>	<p>High "Vouchers usually have a high degree of visibility in the budget and policy processes, when compared with other policy tools." (Steuerle and Twombly, 2002, p. 448)</p>

Compiled from: Salamon (Ed.). (2002c). *The tools of government: A guide to the new governance*. New York: Oxford University Press.

policy tools as either “carrots” or “sticks,” they distinguish between authority and incentive tools, and add to this list policy tools that build capacity, serve as symbolic or hortatory functions, or facilitate learning. The role of policy tools as behavioral interventions at an individual, group, or organizational level is very important to understand. Much more needs to be understood about the nuanced uses of policy tools to enact and support governance networks.

Michael Howlett describes the “second generation” of policy tools study as being interested in the policy context out of which tool selection and implementation emerge and “the nature of instrument mixes” (2005, p. 33). Salamon refers to the mixing of multiple policy tools within a particular context as the “suit” of policy tools (2002a). Howlett observes that the result of mixing policy tools is “less well understood than are choices to select specific types of instruments” (2005, p. 33). Bressers and O’Toole observe that “almost always, the influence of policy instruments is effectively, a blend, or combination, of different instruments, sometimes enacted at different times and often for somewhat different purposes” (2005, p. 135). They note that policy tools may be enacted at different levels of the social and geographic scale (2005, pp. 137, 146).

Drawing on some of the classical distinctions used within policy tool description, Howlett divides policy tools into substantive and procedural instruments (2005). Procedural instruments such as public information tools, collaborative agreements, and mediated conflict resolution fall into this category, as does the funding of public services, policy evaluations, and strategic planning processes. Howlett stresses the importance of searching for “new network appropriate procedural policy instruments to meet the challenges of governance” (Howlett, 2005, p. 46).

Hans Bressers and Laurence O’Toole necessarily dampen our expectations around placing a premium on the selection of policy tools. They aptly warn, “The tools of government are not at the unencumbered disposal of formal policy makers. While instruments of governance may sometimes seem like so many arrows in a quiver, like options merely waiting selection and application at appropriate strategic moments by public officials, this appearance is deceptive” (2005, p. 132). They go on to add that “[policy] instruments are best regarded not as initial shapers of behavior in policy setting but as potential shifters of ongoing processes of policy action over time” (Bressers and O’Toole, 2005, p. 133). The choice of policy tools is “shaped by the networked pattern characteristics of the initial state from which policy-oriented change is sought.” They add that “even more fundamental, any instrument must work its way through and be expected to perturb an existing set of processes involving actors in the policy system” (2005, p. 151). We conclude that policy tools play a role in shaping network-wide structures and that network structures, in turn, shape which policy tools are selected and implemented. As a characteristic of network-

wide structures, policy tools contribute to the network in ways endemic to the complex arrangements between network actors.

Network Governance Structures

Having reviewed the growing body of literature on interorganizational networks, Provan and Kenis introduce three models of interorganizational form: the self-governed network, the lead organization network, and the network administrative organization (2008).

The most collaboratively structured network governance arrangement is the self-governed network, characterized by balanced flows of ties and authorities. Figure 6.1 shows a visual representation of these kind of arrangements.

In participant-governed or shared governance networks (presented in Figure 6.1 in the “perfect” form), authority and power are distributed across the network, as each organizational network node bears social ties between one another. The dominant relational ties operating in participant-governed networks are

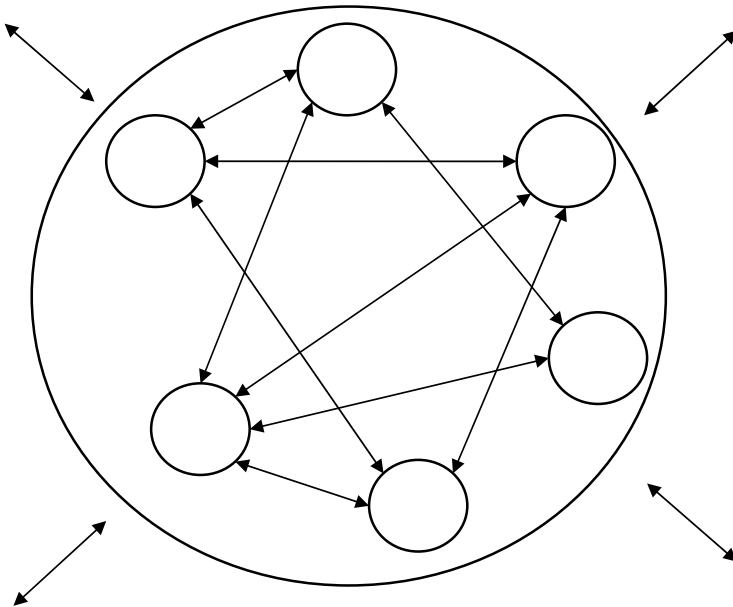


Figure 6.1 Self-Governed Network.

(Source: Milward and Provan (2006). *A manager's guide to choosing and using collaborative networks* (p. 23). Washington, DC: IBM Center for the Business of Government).

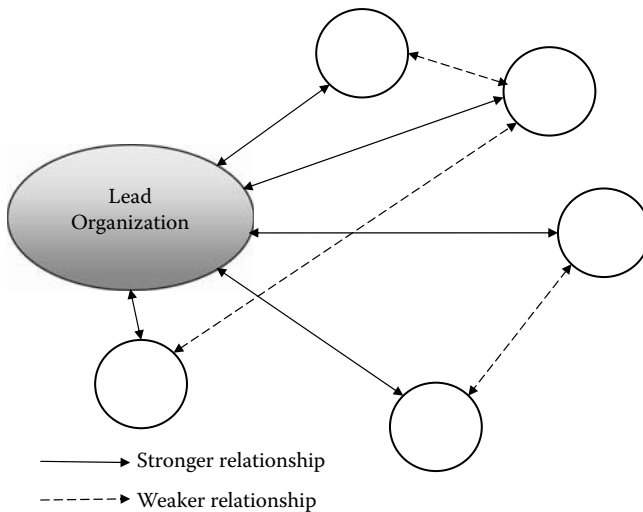


Figure 6.2 Lead Organization Network.

(Source: Milward and Provan (2006). *A manager's guide to choosing and using collaborative networks* (p. 23). Washington, DC: IBM Center for the Business of Government).

horizontal, as a participant-governed network depends, to a large extent, on the qualities of social norms that exist between network nodes. “Shared participant-governed networks depend exclusively on the involvement and commitment of all, or a significant subset of the organizations that comprise the network” (Provan and Kenis, 2008 p. 234).

A second form of network governance is the lead organization configuration, which is represented in Figure 6.2. In lead organization networks, authority and power are more likely to be concentrated within (or through) the lead organization. Following our discussion of strong ties in Chapter 4, we suggest that the stronger the social ties are between the lead organization and the other organizations in the network, the stronger is the lead organization’s authority. In lead organization networks, “all major network-level activities and key decisions are coordinated through and by a single participating member, acting as a lead organization” (Provan and Kenis, 2008, p. 235). In the context of governance networks, governments may take on the role of lead organizations within regulatory systems, exerting certain measures of command and control, and as in the cases of regulatory capture, concessions and compromises provided to their regulated entities. Governments may also serve as the lead organization in grants and contracting arrangements, in which they serve as principals to their contracted agents. Lead organizations may also rely on more cooperative and

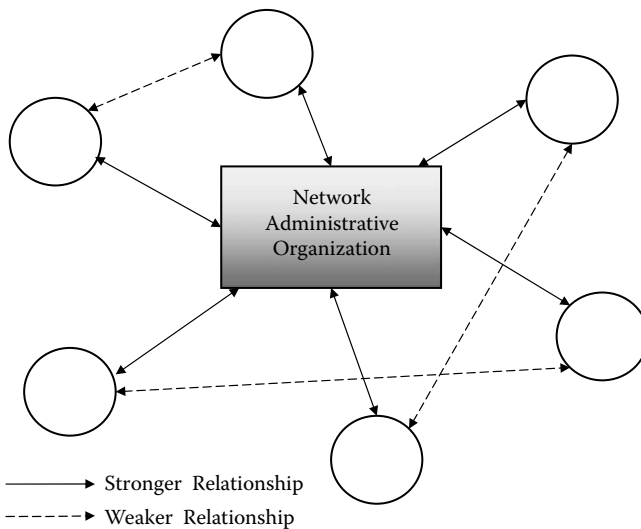


Figure 6.3 Network Administrative Organization.

(Source: Milward and Provan (2006). *A manager's guide to choosing and using collaborative networks* (p. 23). Washington, DC: IBM Center for the Business of Government).

collaborative ties. Writing about the role that cooperation plays in bringing legitimacy to lead organizations, Myrna Mandell observes that a “lead agency’s strong base of power must . . . be tempered by its need to maintain the cooperation of members of the network. . . . These types of networks therefore have a great deal of potential conflict built into them, relating to the need for the lead agency to control the members of the network and the members’ need to remain autonomous” (1990, p. 43).

The third form of network governance is the network administrative organization (NAO). This configuration is represented in Figure 6.3. The network administrative organization is a coordinating body that exists to administer the activities of the interorganizational network. An NAO may exist formally as a distinct organizational node of its own, or informally as a coordinating body (e.g., steering committees, governing boards, etc.) that exists to administer many of the critical functions of the network. “Unlike the lead organization model, however, the NAO is not another member organization. . . . Instead . . . the NAO is established . . . for the exclusive purpose of network governance” (Provan and Kenis, 2008, p. 236). Although few extensive studies of NAO structures have been undertaken to date, we may surmise that NAOs will likely rely on some combination of vertical and horizontal ties when governing their networks’ actions.

Table 6.3 Key Predictors of Effectiveness of Network Governance Form

<i>Governance Form</i>	<i>Trust Levels</i>	<i>Number of Actors</i>	<i>Consensus Around Goals</i>
Shared governance	High	Few	High
Network administrative organization	Moderate	Moderate to many	Moderately high
Lead organization	Low, highly centralized	Moderate	Moderately low

Source: Adapted from Provan and Kenis (2008). *Journal of Public Administration Research and Theory*, 18, 237.

Much like Bressers and O'Toole suggest that the selection of policy tools is contingent on policy actors' preferences and characteristics, Provan and Kenis observe that the selection of a network's governance structures will be based, "at least in part, on the discretion of key network decision makers" (2008, p. 236). They suggest that the adoption of particular governance structures is contingent upon several factors: the levels of trust, number of participants, and goal consensus. Table 6.3 lays out their key predictions of effectiveness.

Drawing on the core relationship between social network structures and horizontal ties, Provan and Kenis (2008) correlate levels of trust with network governance structures. Observing the limited capacity that shared governance structures have within large groups (recall Paine's thought experiment), they suggest that high levels of trust and shared decision making can only occur across networks of limited size. They also anticipate that the degree of consensus around network-wide goals will vary from moderately low in lead organization structures dominated by vertical authorities to the goal alignments necessary to achieve a shared governance structure. They suggest that certain trade-offs between efficiency and inclusiveness are apparent across these forms, with lead organization structures more often viewed as the more efficient structures. Provan and Kenis conclude their article by suggesting a number of hypotheses that may be generated from this model.

Metagovernance

A key concept that has been predominately advanced by European network scholars is the role that “metagovernance” plays in the management of whole network functions. Metagovernance implies that a certain capacity for self-regulation or self-organization is embodied within the structures of the networks themselves. This European context often posits the elected public official in the role of metagovernor (Sorensen, 2006), although we may want to consider the metagovernance roles of network administrative or lead organizations as well. One of the key proponents of metagovernance, Bob Jessop asserts that, “Metagovernance does not amount to the installation of a monolithic mode of governance. Rather, it involves the management of complexity and plurality” (1998, p. 42) (as quoted in Sorensen, 2006, pp. 100–101).

The metagovernance concept implies that there is a conscious attempt of network managers to allow for and enable the network to self-organize or regulate. This “hands-off/hands-on” dynamic is complicated by many factors (Sorensen, 2006), the likes of which are tackled in Chapters 7 and 8 of this book. We argue, however, that enabling and building the capacity of governance networks to be engaged in the conscious steering of network goals and functions lies at the heart of governance network analysis. Understanding the relationship between network function and network structure is a critical feature of creating a kind of situational awareness that makes the metagovernance of networks possible.

Governance Network Mechanisms

In addition to the range of functions, policy tools, and governance structures that exist at the network level we may add network “mechanisms.” The mechanisms were first introduced in the opening chapter as trends that have shaped the development of governance networks.

We recognize that a great deal has been written about each type of governance network mechanism that we represent here. Drawing on this literature, five governance network coordination mechanisms are identified here. These mechanisms combine both structures and functions, and are often facilitated by and through specific policy tools and aligned with specific policy stream functions. These five mechanisms are: intergovernmental, advocacy, regulatory, grants and contract agreements, and partnership networks. Table 6.4 lays out these five patterns in terms of some of the major causes, functions, and trends impacting each configuration. The column to the far right lists where each type of mechanism is presented among the Applications found throughout the book. A quick glance at this reveals a critically important feature of these coordinating mechanisms: multiple mechanisms may be working within and across the same network.

Table 6.4 Network Mechanisms, Causes, Functions, and Trends

<i>Network Mechanism</i>	<i>Policy Tools (Table 6.2)</i>	<i>Policy Stream Function(s) (Figure 5.1)</i>	<i>Trends Impacting Their Formation (Chap. 1)</i>	<i>Type of Intersector Ties</i>	<i>Governance Structure</i>	<i>Examples found in Book Applications (Apps)</i>
Intergovernmental	Intergovernmental grants / transfers; Regulations	All facets of the policy stream	Devolution; partnership	Public-Public	Lead organization; shared governance (for overlapping authority model)	A, C, D, G, H, I, J, L, O, P, Q, R
Advocacy	Public information	Problem framing; policy planning and design; policy coordination; political alignment	Devolution; partnership	Nonprofit-nonprofit; private-private; public-nonprofit	Shared governance; network administrative organization	E, K, R
Regulatory	Regulations	Policy implementation—regulation; political alignment	Regulate; partnership; privatize	Public-private	Lead organization	B, C, D, F, G, L, M, N, P, Q, R
Service delivery	Grants and contracts; other	Policy implementation—service delivery; political alignment	Privatize; partnership; devolution	Public-nonprofit; public-private	Lead organization	A, D, E, F, G, H, I, J, L, P, Q
Partnership	Public information; Grants and contracts	All facets of the policy stream	Privatize; partnership; devolution	Public-private-nonprofit	Shared governance; network administrative organization	A, B, C, D, E, F, G, K, N, O, R

Intergovernmental Coordination

In his most recent book on intergovernmental management, Robert Agranoff writes about the impact that this “era of the network” plays on intergovernmental relations. He asserts that governance networks “work alongside of government often at the same time they are working for government. [Networks] are by no means replacing government or their component organization’s hierarchies” (2017, p. 167). Intergovernmental networks have been described as possessing a combination of “vertical interdependence” and “extensive horizontal articulation” (Rhodes, 1997, p. 38).

Because intergovernmental relations are marked by combinations of hierarchical and collaborative arrangements, there has been little consensus around a singular model of intergovernmental relations for the United States. Deil Wright’s (2000) three models of intergovernmental relations represent the relationship between local, state, and national governments as taking one of three forms: coordinate, inclusive, or overlapping authority. Each model represents the possible types of relationships that exist between governmental institutions.

The first of these configurations is the coordinate authority model, represented in Figure 6.4. The coordinate authority model implies that national, state, and local governments are independent and autonomous (Wright, 2000, p. 75).

The second configuration of intergovernmental relations is the inclusive authority model, represented in Figure 6.5 as a series of nested, essentially hierarchical relations between levels of government. The inclusive authority model implies that national governments exist as the principals over state and local governments, implying a hierarchical network arrangement (Wright, 2000, p. 79). Under this view, states exist as “administrative districts” for federally established policies (Wright, 2000, p. 82).

The third model of intergovernmental relations suggests that the different levels of government exist as arenas of overlapping authority, a configuration that is represented in Figure 6.6. Wright (2000, p. 84) outlines the three critical characteristics of this particular model:

1. Substantial areas of governmental operations involve national, state, and local governments simultaneously.
2. The areas of autonomy between levels of government are comparatively small.
3. The power and influence available to any one jurisdiction is significantly limited.

Wright notes that overlapping authority is established through substantial negotiation and bargaining. Federalism requires that governments of different

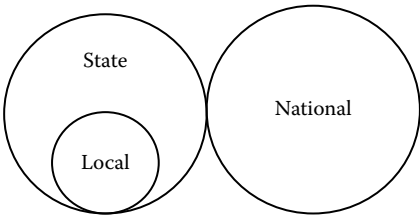


Figure 6.4 Coordinate Authority Model of Intergovernmental Relations.

(Adapted from Wright, 2000.)

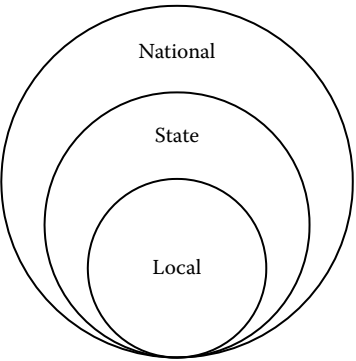


Figure 6.5 Inclusive Authority Model of Intergovernmental Relations.

(Adapted from Wright, 2000.)

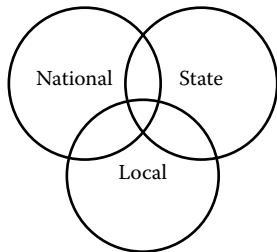


Figure 6.6 Overlapping Authority Model of Intergovernmental Relations.

(Adapted from Wright, 2000.)

scales cooperate with one another. Writing of the existence of such “cooperative federalism,” Jane Perry Clark (1938) first recognized that

much of the cooperation between federal and state governments has been found in the sea of governmental activity without any chart, compass, or guiding star, for cooperation has been unplanned and uncorrelated with other activities of government even in the same field. Nevertheless, a *certain number of patterns* may be traced in the confusion. Cooperation has frequently been a means of coordinating the use of federal and state resources, of eliminating duplications in activity, of cutting down expenses, of accomplishing work which could not otherwise be carried out, and in general of attempting to make the wheels of government in the federal system of the United States move more smoothly than would otherwise be possible.

(Agranoff and McGuire, 2003, pp. 37–38)

The articulation of power between levels of government is highly dependent on the context. Matters of constitutional law, for instance, take precedence over laws established at the local level, suggesting the nested hierarchy found in Figure 6.5. In other areas, states are independent of federal authority, as in the case of determining marriage rights, the setting of land use and zoning policies, etc. In still other cases, the federal government attempts to influence state and local policies with the powers of the purse.

Consider the matter of public education vis-à-vis intergovernmental relations. In the United States, states and localities are chiefly responsible for educating youth. In most communities in the United States, property taxes paid to towns and cities are coupled with federal (and some state) funds to pay for schools. Local school boards are often elected and charged with the fiduciary responsibility to ensure that a quality education is provided to all children. In the case of education, the federal government has somewhat limited authority. It may use the policy tools at its disposal, particularly block grants, as an incentive for state and local compliance. The federal government cannot mandate what schools teach and how they teach it. In essence, the federal government must rely on the networks that are structured through the flow of block grants to state governments and local school districts to exercise its power. This example illustrates the overlapping authority model. These contextually driven variations are outcomes very similar to what network theorists refer to as complex and adaptive systems, a subject that we will explore in Chapter 7.

The distribution of power across intergovernmental relations has been the subject of political reforms over the years. Devolution is the transfer of governance responsibility for specified functions to subnational levels, either publicly or privately owned, that are largely outside the direct control of the central

government. Devolution is used to describe the shift toward administrative decentralization, which transfers specific decision-making powers from one level of government to another (which could be from a lower level to a higher level of government), or government to nonprofit and private sector interests and constituencies.

Network relationships are also established between institutions within a single branch of government, creating the basis for *intragovernmental* relations. This is most easily demonstrated in the bicameral structure of the U.S. Congress and state legislatures. The move to a bicameral Congress was another case in which the framers looked to network structures to balance power, in this case, between large and small states. The relationships between legislative bodies are marked by collaboration and cooperation as well as compromise and concession. Interagency networks may exist in the executive branch as well, as departments may collaborate or negotiate with one another around particular policy programs.

The role that intragovernmental relations play in the design and execution of public policy and public service delivery has been described within the literature as “joined-up” government. The joined-up government literature is chiefly concerned with “coordination principally within a single tier of government” (Perri 6, 2004, p. 105). The nature of intra-agency coordination and collaboration is a topic that still demands further study. As governance agencies are asked to align practices around topics that transcend jurisdictional boundaries, the challenges and opportunities associated with joined-up government gain in importance. We suggest that these intra-agency configurations be considered as variations of the governance network form.

Advocacy

Early variations of intersectoral studies focused on the “iron triangles” of congressional committees, executive branch agencies, and interest groups (Adams, 1981). Iron triangles have been historically presented as closed networks and have sometimes been referred to in the literature as “subgovernments” (Nownes, 2001, p. 198). It is an analytical construct that has fallen out of favor somewhat, following Heclo’s critique that the iron triangle is too narrowly construed. The three points of the triangle are represented in Figure 6.7.

With the increasing number of organized interest groups, and the capacity of these groups to access elected officials, Heclo introduced the “issue network” as a counter to the iron triangle, viewing issue networks as temporary structures that are organized around particular interests and common agendas. When objectives are met or conditions change, issue networks have the capacity to dissolve. Heclo’s issue networks are relatively informal networks with permeable boundaries, and to an extent they possess easy entrance and exit. He originally presented the issue network as a “theory of non-structure” (Hula, 1999, p. 4),

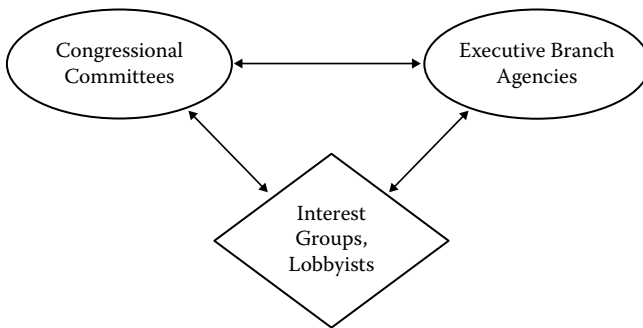


Figure 6.7 The Iron Triangle.

anticipating more recent interests in the self-organization and emergent qualities of complex adaptive systems. Hecla understood issue networks as social networks comprised of, essentially, policy elite. Issue networks are structured around informal, interpersonal ties that may be temporarily coordinated, if ever at all. Among the range of network types introduced within the public administration, policy studies, and governance literature, issue networks generally possess the largest number of participants and the least amount of formal coordination.³

The types of informal social networks that impact the creation of public policy have been described as networks of “interlocking directorates” that

weld together men and women of high finance and industrial muscle who “decide” matters between themselves informally. Those decisions then have a profound impact on the economy and beyond. But how can any collective influence be effective if the power so controlled is neither visible nor accountable? Indeed, how can elected representatives properly conduct their own legitimate business if they face similar obstacles? The “establishment”—operating as a network of influential opinion formers, agenda setters, and decision takers with a shared social, educational, and cultural background may act to usurp and undermine genuine democratic government.

(Thompson, 2003, p. 175)

Rhodes has suggested that issue networks may turn into more formalized networks. We choose to describe these networks as interest group coalitions that are interorganizational networks of organized interest groups, advocacy organizations, and collective interest groups engaged in coordinated action to influence the framing of public problems, the design and selection of policies,

or the evaluation of policy implementation. Discussing the proliferation of interest group coalitions in legislative processes, Hula has noted that “a cursory glance through almost any account of how a bill became law is likely to reveal a detailed description of the coalitions that supported or opposed the legislation” (Hula, 1999, p. 22). He goes on to add that “[they] are arguably the central method for aggregating the viewpoints of organized interests in American politics. They serve as institutional mediators reconciling potentially disparate policy positions, in effect ‘predigesting’ policy proposals before they are served to the legislature” (Hula, 1999, p. 7). These coalitions generate the basis for what Buchann and Tullock describe in their classic 1962 book as the “calculus of consent.”

Interest group coalitions operate to influence the development of public policy by advocating for the existence or severity of certain public problems, calling for the use of particular policy tools, or offering suggestions regarding how policies should get coordinated. The interest group coalition also exists to align political actors into a coherent and more powerful interest group.

There is reason to suggest that over the last few decades, the number and influence of interest group coalitions has risen. As evidence of this, Hula (1999) points to the growth in the number of national associations in the United States, from 5,000 in 1955 to over 23,000 in 1999.

The basic interorganizational network structure of an interest group coalition is one of ties between various constituencies who join together around common goals and interests they share. The ties between these constituencies may be formalized through the development of a network administrative organization (NAO) designed to pursue the aims of the coalition (Provan and Kenis, 2008).

Most trade associations fit such a structure, with the trade association itself representing a formalized and permanent NAO. Other interest group coalitions may form an NAO to temporarily coordinate coalition activities. In these cases, we find the governance network coalescing around what Knoke describes as the “collective action organization” (1990). It was sociologist Talcott Parsons (1951) who first identified the role of collective action organizations as a form of democratic association that straddle “the public and private sectors” and “knit together the diverse institutions of modern civil society” (Knoke, 1990, p. 8). Collective action organizations are “founded on the premise of democratic member control. Ideally, officials [of a collective action organization] must attend to and be responsible to members’ concerns” (Knoke, 1990, p. 15). Thus, in collective action organizations, the members of the interest group coalition share authority over the NAO with other members. Membership may be construed at the individual person level (as, for instance, when an individual joins the Sierra Club) or organizational level (as in the case when individual corporations join a trade association to represent their interests). *The NAO is not, unto itself, the governance network*—an assertion that carries for any NAO in any governance

network. Rather, the governance network gets recognized as the composite of the members of the collective action organization and the horizontal ties that the collective action organization forges with governments.

Although the formation of interest groups has long been hailed as a virtue of democratic societies, the growth of interest group coalitions and advances in their capacities to coordinate collective action and influence problem framing and policy creation have raised some serious concerns about the extent to which collective action organizations actually represent a coherent set of collective interests. In Crenson and Ginsberg's (2002) book, *Downsizing Democracy: How America Sidelined its Citizens and Privatized its Public*, they track the evolution of collective action organizations from their early reliance on the active involvement of grassroots constituencies to "member-less" collective action organizations that rely on mass mailing lists, interpersonal social ties with people in positions of power in the government, and the courts to exert influence. In these cases, the NAOs responsible for coordinating network actions become the principal actors, harnessing the legitimacy that comes with representing collective interests without having to be held accountable to those collective interests. The extent to which a collective action organization represents the actual interests of its individual members is a matter that we will be discussing in the context of the democratic anchorage of the governance network in Chapter 9.

Regulatory

The role of networks in undertaking regulatory affairs has been a relatively under-appreciated phenomenon. The relationships forged between regulators and regulated entities take on network configurations that we describe as regulatory subsystems. The traditional outlook on regulatory subsystems places government regulators as the principals over regulated agents. These traditional ties are grounded in the state's capacity to render coercive power to control the behaviors of regulated agents. Today, governments most often play the role of lead organization, responsible for regulating the social, economic, and environmental behaviors of those defined as the regulated agents.

Jonathan Koppell describes the regulatory authority of governments along the lines of unified or divided concentration of regulatory authority, single-headed or multiheaded structures of agency leadership, and single- or multipurpose scope of regulatory authority (2003, p. 150). The points he makes regarding the nature of regulatory oversight suggest that regulatory subsystems cannot be defined in terms of a simplified principal-agent relationship, a point that we made in our discussion of vertical administrative authority in Chapter 4.

The earliest recorded efforts to protect the public's health date back to the thirteenth century, in which there is evidence of public health regulations concerning food quality in Great Britain. In the United States, the first food

regulations were introduced through the Meat Inspection Act of 1907 (May, 2002). There was a growth in governmental or quasi-governmental agencies to regulate the private market during the first two-thirds of the twentieth century (Koppell, 2003; Nace, 2005).

The U.S. federal government took a more active role in the economic regulations of firms in 1887, with the introduction of the Interstate Commerce Act, initially designed to regulate the powerful railroad industry. The Interstate Commerce Act shifted the balance of power to regulate economic activities from the states to the federal government (Salamon, 2002c). States and local governments still hold onto the power to regulate industries like the telecom and utility industries. The economic regulation of markets solidified as a result of the Great Depression when it became apparent that economic markets were far too sensitive to speculation and fickle investor psychology. The relative health of the market became a matter of public concern, leading to the development of regulations designed to influence the behaviors of the agricultural, airline, truck and freight, water transport, insurance, banking, and natural gas industries (Salamon, 2002c). Lester Salamon notes that beginning in the 1970s, the use of government to regulate economic activities began to be pulled back in the United States. The deregulation of economic activities continued on through to 2008. Following the “Great Recession,” more recent financial services regulations appear to be at risk from substantial threats.

Social regulations, designed to ensure food, drug, transportation, and workplace safety, have been standard features of governments’ regulatory authority. Peter May defines social regulation as the rules that govern expected behaviors or outcomes; standards that serve as benchmarks for compliance; sanctions for noncompliance; and the administrative apparatuses designed to enforce sanctions (May, 2002, p. 158). Criminal and civil law are forms of social regulation. In recent years, social regulations have become more pervasive, as consumer movements have applied pressure on governments to regulate the quality of goods and services provided by corporations, firms, and businesses.

The publication of Rachel Carson’s *Silent Spring* (1962) is said to have given birth to the contemporary environmental movement. As concerns about water and air quality came to the fore, a new arena of regulation opened up. In response to the need to address the proliferation of pollutants into the environment, the Environmental Protection Agency (EPA) was created in 1970. Backed by a series of legislative acts designed to protect watersheds, oceans, and air quality, the EPA has instituted a series of environmental regulations designed to ensure that corporations stay within limits imposed by law. However, over the course of the relatively short history of the EPA, its use of coercive authority through regulation has often been a matter of last resort (Gerlak, 2005). Newer, self-regulation approaches to environmental regulation may be found, often relying on industries to police themselves, enter into voluntary compliance

agreements, and use nonregulatory tools such as tradable permits to bring about desired behaviors.

The recent history of environmental regulation, in particular, illustrates how the interest group coalitions formed by industry have attempted to restructure the regulatory relationship between governments and industries. Crenson and Ginsberg discuss the evolving nature of regulatory systems in the quote below:

Public agencies and private interest groups discovered that they could help to resolve one another's problems. For the agencies, there was the complex task of regulating modern industries, which would have become incomparably more complex had the industries been disorganized and uncooperative. In effect, interest groups helped to prepare their industries for regulation by organizing the members into coherent and articulate alliances. The inclusion of these alliances in the regulatory process assured a high degree of voluntary compliance. [Government], for its part, used its coercive power to enforce the regulations that emerged from its deliberations with the regulated interests. If most firms cooperated with regulations, the occasional free riders who attempted to sidestep the costs of compliance in order to gain unfair competitive advantage could be targeted for regulatory sanctions. Compliant firms might therefore have some confidence that their political agreeability would not place them at an economic disadvantage with respect to lawless competitors. Voluntarism and coercion were two ends of the same bargain.

(Crenson and Ginsberg, 2002, p. 122)

Recent trends across all forms of regulation have seen a move away from traditionally defined regulatory relationships, in which government serves as the principal authority over its regulated bodies, toward what may be described as more collaborative arrangements. Efforts to promote self-regulation have been common, particularly concerning environmental matters. In some aspects of food and drug regulations, the Food and Drug Administration has entered into cost-sharing agreements with the industries that they regulate (Frederickson and Frederickson, 2006). In some instances, such as the pharmaceutical industry, the regulated agent essentially pays for research on the safety and effectiveness of its own drugs (Frederickson and Frederickson, 2006).

One type of responsive regulation is "enforced self-regulation" (Ayres and Braithwaite, 1992, p. 101) or "management-based regulation" (Coglianese and Lazer, 2003). In this regulatory framework, government provides broad compliance standards that organizations are expected to meet, though organizations are provided a great deal of flexibility in how they meet those standards (Hutter, 2001). The idea behind enforced self-regulation is that organizations

will internalize the standards as their own, and therefore strive to comply normatively and, ultimately, voluntarily (Coglianese and Lazer, 2003). The self-regulating behavior of industry is facilitated through the existence of networks built on some combinations of vertical and horizontal ties.

The move away from coercive regulation to more voluntary forms of compliance has led some to raise concerns for the “regulatory capture” of government regulators (Peltzman, 1976), shifting regulatory powers away from states and into the hands of the regulated agents. Studies of regulatory capture have found that capture was more prevalent when one regulatory agency was responsible for overseeing a single industry (Lewis-Beck and Alford, 1980; Macey, 1992). In studying the dynamics that shape the development of regulatory subsystems, Terry Moe has gone as far as to suggest that some regulatory agencies are designed to fail (1989). Construing regulatory subsystems through the governance network framework is particularly useful in making sense of this kind of dynamics, particularly as the democratic anchorage of the governance network is considered.

We noted in Chapter 1 how the financial crisis of 2008 could have signaled a new era of regulatory practices. The extent to which the new regulatory era draws on, or reverts back to, the self-regulatory era marking the last fifty years is yet to be determined. The nationalization of the banking, parts of the auto, mortgage, and health care systems in the United States suggests the possibility of new forms of public-private partnership and hybridized arrangements.

Service Delivery

During the American Revolutionary War, the colonial government initiated its first contracts with seamstresses to make soldiers’ uniforms (Cooper, 2003), beginning a long history of the U.S. government’s reliance on private firms for the delivery of certain goods and services. Most early contracts were for the procurement of supplies and other material needs required by government. Over time, contracting out has become a widely accepted practice, used to provide a diverse array of public goods and services, ranging from sanitation services to certain features of military operations. In 1831, the Supreme Court ruled that “the government had inherent authority to contract,” legitimizing a practice that had been in operation for several decades. However, it also ruled that “government could not contract away certain basic governmental power. Although we generally would include such matters as lawmaking within that restriction, the range of activities contracted out today makes the judgment about what is inherently or ‘inalienable’ government activity a continuing subject of debate” (Cooper, 2003, p. 28).

The privatization movement is often equated with contracting government services out to the private and nonprofit sectors. Privatization has come to mean

many things, and is often aligned with the virtues of bringing market competition to the delivery of public goods and services. Privatization, simply defined, is the “enlisting [of] private energies to improve the performance of tasks that would remain in some sense public” (Donahue, 1989, p. 7). Most often, “private energies” are harnessed through the allocation of public funds to private firms and nonprofits through the policy tools of procurement and purchase of service contracts, and grants. Most procurement contracts are extended to private firms that have the capacity to deliver certain products or services to a government agency or to others on the government’s behalf (Kelman, 2002, p. 282). Purchase of service contracts may be made with either for-profit or nonprofit organizations, which in turn deliver a service to an eligible group of “clients” (DeHoog and Salamon, 2002, p. 320). Grants, generally awarded to nonprofit organizations or to governments of a smaller geographical unit, are “payments from a donor government to a recipient organization or an individual,” with the “aim of either ‘stimulating’ or ‘supporting’ some sort of service or activity by the recipient, whether it be a new activity or an ongoing one” (Beam and Conlan, 2002, p. 340).

Cooper recognizes that “many contracts are not simple purchases, but alliances, many involving critically important interdependent relationships between government and its contractors” (2003, p. 125). Contracts and grants are tools that structure the relationships occurring between governments and the contracted agent. As a legally binding agreement, a grant or contract binds the two parties together in a principal-agent relationship. In essence, the government, as the presumed lead organization, is said to exercise some measure of control over the contracted agent. However, for such a vertically arranged relationship to be maintained requires the contractor-contractee relationship to be robust. For a government to exert control over the contracted agent, it has to have enough administrative capacity and knowledge to do so. When governments lack the capacity to effectively manage grants and contracts, the authoritative role of government gets compromised. Power shifts to the contracted agent, who possesses more knowledge about what is happening on the ground.

Contracts and grants are also made with nonprofit and for-profit organizations because these entities are capable of filling a role or providing a service that government cannot. Thus, contracts and grants may be used as tools to develop an intersector network with the capacities to meet public needs. For the purposes of this book, we describe these kinds of network configurations as grants and contract agreements (GCAs).

Even as far back as the late 1700s, “it was becoming clear that contractors were quite willing to gouge the taxpayer and did not always live up to their promises about the level and quality of service. What we now call the problem of quality assurance, the need to guarantee, quite apart from price, that contractors deliver quality services and goods, was becoming important” (Cooper, 2003, p. 24).

The principal-agent problem that we touched on in Chapter 4 can lead to information asymmetries and a shift in power. When government principals are not adequately staffed to monitor grants and contracts, the efficiencies once ascribed to the move to privatize government services get lost. As more complex and politically sensitive services get contracted out, such as in cases of intelligence and military security, the potential loss of democratic anchorage and public accountability becomes a serious concern.

OTHER MODELS USED TO CHARACTERIZE CONTRACT RELATIONSHIPS

Top-down model: “Based on two normative premises: that the federal system must be considered as a single system and that the de facto interdependence of the federal system mandates the application of executive-centered logic to the system.”

Donor-recipient model: Involves “grantors and grantees based on actors within a collaborative system who depend on one another instead of operating by control at the top of the system. It recognizes that program collaborators must rely on each other within the parameters of a program that involves varying degrees of mutual, two-party control.”

Source: Agranoff and McGuire (2003). *Collaborative public management: New strategies for local governments* (pp. 56, 59). Washington, DC: Georgetown University Press.

Partnerships

Public-private partnerships (PPPs) are a relatively recent development in governance network structures and have been described as cooperative ventures between states and private businesses. PPPs are strategic alliances between public, private, and nonprofit sector entities in which risk is shared and power between the partnering entities is relatively distributed in nature. PPPs are typically formed to “increase the scale and visibility of program efforts, to increase support for projects, and to leverage capital to enhance feasibility, speed, or effectiveness” (O’Toole, 1997b, p. 46).

PPP arrangements differ from public goods and services grants and contract agreements (GCAs). In GCAs, resource exchanges occur between governmental principals and their contracted agents, with governments providing funding and

oversight, and the contracted agent providing either goods or services. In PPPs, resource exchanges are more complexly arranged. Nongovernmental actors bring additional resources to a PPP: financial capital or the skills and expertise of their human capital. In PPPs, risks may be more equitably distributed across all individual network members.

PPPs may take on structures that are shaped, in large part, by the scope, scale, and policy arenas in which the PPP is operating. PPPs are created to provide services that meet public needs, such as public information campaigns, monitoring and research activities, and collaborative planning processes. Such projects may be carried out at local, small scales or large, international scales. These kinds of PPPs do not require the involvement of governments. However, government agencies may provide funding to support the coordination of the PPP. Even in other cases, government may be an equal partner in a collective undertaking. Linder and Rosenau define partnering in this context as

sharing of both responsibility and financial risk. Rather than shrinking government in favor of private-sector activity through devolution of public responsibility, or other forms of load-shedding, in the best of situations partnering institutionalizes collaborative arrangements where the difference between the sectors becomes blurred.

(Linder and Rosenau, 2000, p. 6)

PPPs are also created to undertake large, capital improvement projects in which “at least one government unit, and a consortium of private firms” are “created to build large, capital intensive, long-lived public infrastructure, such as highway, airport, public building, or water systems, or to undertake a major civic redevelopment project.” In such instances, “private capital and management of the design, construction, and long term operation of the infrastructure are characteristic of such projects, along with eventual public ownership” (Savas, 2005, pp. 15–16).

PPPs may be considered variations of “cross-sector collaborations.” John Bryson, Barbara Crosby, and Melissa Middleton Stone synthesized the literature concerning the factors that contribute to the development of collaborative partnerships between two or more organizations from different social sectors. They define the cross-sector collaboration as “the linking or sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately” (Bryson, Crosby, and Stone, 2006, p. 44). They lay out a series of propositions relating to the development of cross-sector collaborations that provide an initial look into the factors that give rise to the use of partnership development as a strategy. These propositions are laid out in Table 6.5.

Table 6.5 Bryson, Crosby, and Stone's Design and Implementation Propositions for Cross-Sector Collaborations

Proposition 1	Like all organizational relationships, cross-sector collaborations are more likely to form in turbulent environments. In particular, the formation and sustainability of cross-sector collaborations are affected by driving and constraining forces in competitive and institutional environments.
Proposition 2	Public policy makers are most likely to try cross-sector collaborations when they believe the separate efforts of different sectors to address a public problem have failed or are likely to fail, and the actual or potential failures cannot be fixed by the sectors acting alone.
Proposition 3	Cross-sector collaborations are more likely to succeed when one or more linking mechanisms, such as powerful sponsors, general agreement on the problem, or existing networks, are in place at the time of their initial formation.
Proposition 4	The form and content of a collaboration's initial agreements, as well as the processes used to formulate them, affect the outcomes of the collaboration's work.
Proposition 5	Cross-sector collaborations are more likely to succeed when they have committed sponsors and effective champions at many levels who provide formal and informal leadership.
Proposition 6	Cross-sector collaborations are more likely to succeed when they establish—with both internal and external stakeholders—the legitimacy of collaboration as a form of organizing, as a separate entity, and as a source of trusted interaction among members.
Proposition 7	Cross-sector collaborations are more likely to succeed when trust-building activities (such as nurturing cross-sectoral and cross-cultural understanding) are continuous.
Proposition 8	Because conflict is common in partnerships, cross-sector collaborations are more likely to succeed when partners use resources and tactics to equalize power and manage conflict effectively.
Proposition 9	Cross-sector collaborations are more likely to succeed when they combine deliberate and emergent planning; deliberate planning is emphasized more in mandated collaborations, and emergent planning is emphasized in nonmandated collaborations.

Table 6.5 Bryson, Crosby, and Stone's Design and Implementation Propositions for Cross-Sector Collaborations (continued)

Proposition 10	Cross-sector collaborations are more likely to succeed when their planning makes use of stakeholder analysis, emphasizes responsiveness to key stakeholders, uses the process to build trust and the capacity to manage conflict, and builds on distinctive competencies of the collaborators.
Proposition 11	Collaborative structure is influenced by environmental factors such as system stability and the collaboration's strategic purpose.
Proposition 12	Collaborative structure is likely to change over time because of ambiguity of membership and complexity in local environments.
Proposition 13	Collaboration structure and the nature of tasks performed at the client level are likely to influence a collaboration's overall effectiveness.
Proposition 14	Formal and informal governing mechanisms are likely to influence collaborative effectiveness.
Proposition 15	Collaborations involving system level planning activities are likely to involve the most negotiation, followed by collaborations focused on administrative level partnerships and service delivery partnerships.
Proposition 16	Cross-sector collaborations are more likely to succeed when they build in resources and tactics for dealing with power imbalances and shocks.
Proposition 17	Competing institutional logics are likely within cross-sector collaborations and may significantly influence the extent to which collaborations can agree on essential elements of process, structure, governance, and desired outcomes.
Proposition 18	Cross-sector collaborations are most likely to create public value when they build on individuals' and organizations' self-interests and each sector's characteristic strengths while finding ways to minimize, overcome, or compensate for each sector's characteristic weaknesses.

Source: Bryson, Crosby, and Stone (2006). *Public Administration Review*, 66, 44–55.
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The network configurations that arise in PPPs may take several forms. Because of the extensive need for coordination within most PPPs, either an NAO or lead organization structure is likely to be adopted. Quasi-public-private organizations, committees, or authorities may be charged with coordinating the PPP. Government units, for-profit firms, or nonprofit organizations may serve as lead organizations in some PPP configurations. Depending on the flow of resources and collective norms developed in the PPP, all types of relational ties (vertical, horizontal, and diagonal) may be found. In cases of extensive investments of capital, PPP arrangements may be formalized through the eventual use of contracts to specify roles, responsibilities, and resource exchanges. Thus, grants and contracts are policy tools that can be applied to PPPs.

Challenges associated with PPPs often center on questions of risk, and which sectors or levels of scale are to shoulder the financial burdens of the more capital-intensive PPP projects. Questions of who takes credit (or blame) for PPP successes and failures may arise. If principal funders exist, the amount of influence they wield may be questioned. A significant amount of bargaining and negotiation is often called for. The capacity for particular interest groups to enter into PPPs with an eye toward achieving individual gains is very real. Although they are optimistic about PPPs, Donahue and Zeckhauser caution about governments' delegation or sharing of power with other sectors, observing how for-profit and nonprofit organizations will likely have differing views of their own payoff discretions and preference discretions (2011). These dynamics may be understood as a matter of who benefits from PPP projects and how accountability gets rendered within and across them.

Emerging Mechanism: Geogovernance

It is useful here to briefly discuss a fifth kind of governance network configuration that represents an emergent form of governance networks that operate without borders. Of particular interest among some scholars is the emerging pattern of both regional governance (Miller, 2002) and global governance organizations (GGOs). As challengers to the territorial jurisdiction, both global governance organizations and regional governing institutions are examples, albeit different forms, of what Gilles Paquet (2005) refers to as geogovernance.

What geogovernance institutions hold in common are their cross-boundary characteristics and operations. Jonathan Koppell (2003) refers to global governance organizations as "hybrid" or "quasi-governments" that are quite prevalent and perform critical system-connecting functions. While critically important, these hybrid governments and administrative operations have a very different form of democratic anchorage than institutions that are territorially bounded. These institutions are subject to the accountability tensions addressed later in

this book and can be viewed as lacking authority because they lack traditional forms of accountability.

The movement toward metropolitan regionalism as depicted in the work of David Miller (2002)—metropolitan councils of government, region-wide special districts, city-county mergers, metropolitan consolidations—is becoming prevalent and represents attempts to deal with jurisdictional fragmentation that is apparent in metropolitan regions and the general disconnect between jurisdictions and region-wide social, economic, and infrastructure problems. These regional associations often lack similar support as the hybrid institutions discussed above due to nontraditional accountability foundations and authority.

An important version of governance network configuration that emphasizes contemporary urban regions is the concept of “urban regimes” (Stone, 1989). The attractiveness of this concept for the study of governance networks is the urban regime focus on the inclusion of urban network actors beyond the government in the shaping of policy. These network actors may be narrowly defined, as in descriptions of alliance with powerful local and national economic interests, or broadly defined, as a coalition of private, public, nonprofit, and broader civic interests. For Stone, a regime “is specifically about the informal arrangements that surround and complement the formal workings of government authority” (p. 3) . . . “[they are] informal arrangements by which public bodies and private interests function together in order to be able to make and carry out governing decisions” (Stone, 1989, p. 6). Regimes involving “informal modes of coordinating efforts across institutional boundaries are what [he calls] ‘civic cooperation’” (Stone, 1989, p. 5). The cross-jurisdictional and potentially broad representative nature of the urban regime is important here. Regime theory (Stoker, 1995) offers the promise of understanding how urban stakeholders are interdependent in addressing common, cross-jurisdictional social and economic issues.

Thus, a central feature of geogovernance is the disconnection between locally established forms of accountability and the cross-boundary and lateral forms of operation and cooperation that operate in these institutions. In essence, politics is very much jurisdictional, while administration is interdependent. The challenge of bureaucracies operating without borders is the lack of institutional accountability because “geo-governance authority is essentially borrowed from member organizations . . . but represents a different kind of legitimacy based on a complex array of administrative accountability standards” (Frederickson and Meek, 2008). However, as these forms become more frequently employed, Paquet (2005) argues that the emerging forms of geogovernance will represent opportunities for new forms of collaboration and competition across jurisdictional and national interests.

A Configural Outlook on Network Structures and Functions

In this chapter we have introduced a set of structural characteristics that may be used to describe structural configurations at the network-wide level. We began by noting that governance networks are, by definition, implicated in either the preenactment, enactment, or postenactment of certain policy tools. Following Lester Salamon and his colleagues, we explored the relationship between policy tool characteristics and the structural configurations of governance networks. We then introduced Keith Provan and Patrick Kenis's framework of network governance, suggesting that this typology is useful in describing macro-level network structures. We then discussed five major forms of governance network configurations found within the literature. We noted how these configurations distinguish themselves by their place within the policy stream, the type of macro-level governance structures they take on, and their sectoral composition.

Although we have broken policy tools, network governance structures, and different types of network mechanisms down into discrete categories, we must appreciate that most governance networks will be shaped by more than one policy tool, more than one simple governance structure, and more than one type of coordinating mechanism. The policy tools and instrument literature is clear in positing that policy tools are rarely offered independently of one another. Lester Salamon refers to them as a suite of policy tools (2002a). As the range of Applications found throughout this book can attest, the network level structural and functional features discussed in both Chapters 5 and 6 are very likely subject to much "mixing and matching." This is the ultimate point raised by Jeorg Raab and his colleagues in their advances of the configurational approach to network effectiveness (2013).

As complex adaptive systems, many governance networks possess more than one center of power or activity, possessing pockets of self-governance, and other instances of lead organization behavior. Various combinations of structural and functional form persist and evolve over time.

Over the course of the last several chapters we have steadily broadened our scope, beginning with the characteristics of individual network actors, to the kind of ties they have between them, and then in the last two chapters, the types of functions and structures governance networks take on.

So far, we have been describing network structures as being brought to life through a complex array of resource exchanges and collective actions orchestrated between certain configurations of policy actors. We now must turn our attention to describing governance networks in terms of their systems dynamics. In Chapter 7 we describe systems dynamics in terms of boundaries and borders, open and closedness, and feedback loops and logic models.

Applications

The two Applications highlighted at the end of this chapter provide comparative analysis of whole networks. The first study, Application F, examines the composition of environmental “stewardship networks” in two different U.S. cities. The second study, Application G, compares the types of networks that are inferred in two different policy plans that were designed to address the same water pollution problems within the same geographic region. The latter study also illustrates the relationship between policy tools and networks.

APPLICATION F: THE STRUCTURE OF METROPOLITAN ENVIRONMENTAL STEWARDSHIP NETWORKS IN SEATTLE AND BALTIMORE

Romolini, M., Grove, M., Ventriss, C., Koliba, C., and Krmkowski, D. (2016). Towards an understanding of citywide urban environmental governance: An examination of stewardship networks in Baltimore and Seattle. *Environmental Management*. DOI: 10.1007/s00267-016-0704-4

Abstract

Efforts to create more sustainable cities are evident in the proliferation of sustainability policies in cities worldwide. It has become widely proposed that the success of these urban sustainability initiatives will require city agencies to partner with, and even cede authority to, organizations from other sectors and levels of government. Yet the resulting collaborative networks are often poorly understood, and the study of large whole networks has been a challenge for researchers. We believe that a better understanding of citywide environmental governance networks can inform evaluations of their effectiveness, thus contributing to improved environmental management. Through two citywide surveys in Baltimore and Seattle, we collected data on the attributes of environmental stewardship organizations and their network relationships. We applied missing data treatment approaches and conducted social network and comparative analyses to examine (a) the organizational composition of the network, and (b) how information and knowledge are shared throughout the network. Findings revealed similarities in the number of actors and their distribution across sectors, but considerable variation in the types and

locations of environmental stewardship activities, and in the number and distribution of network ties in the networks of each city. We discuss the results and potential implications of network research for urban sustainability governance.

Methods

Network analysis and surveys; interviews; source document analysis

Across most cities in developed countries there are a host of organizations in place whose explicit goal is to ensure that environmental policies and services are in place to provide for the health of local ecosystems, the availability of green spaces, and the overall sustainability of natural capital within urban environments. With resources scarce, these organizations must work together through networks and oftentimes in cooperation with local governments and area businesses.

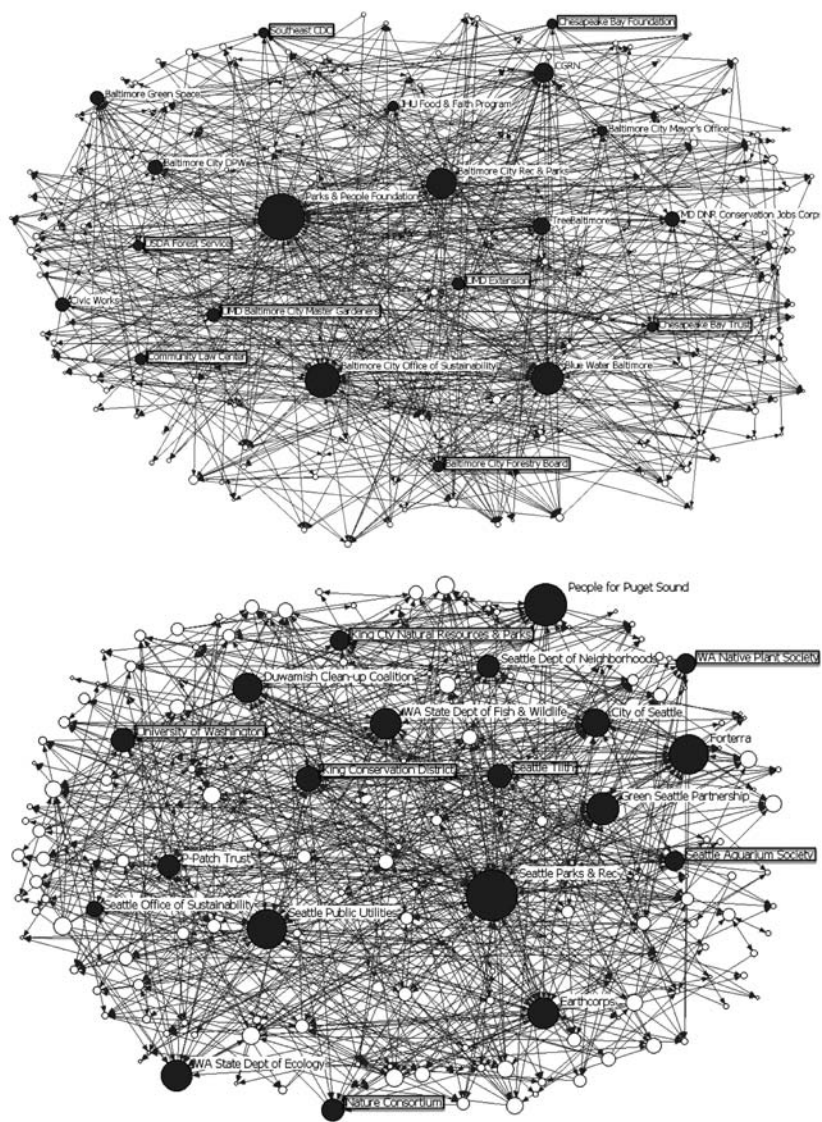
Romolini et al. (2016) conducted a comparative analysis of the “environmental stewardship” networks that exist in two large American cities: Seattle and Baltimore. Their initial assumption was that networks of nonprofits, governments, and businesses align around environmental management and stewardship activities, ranging from tree planting, green infrastructure and green spaces to other urban level environmental stewardship activities. The network-related questions in a survey of stewardship organization asked respondents to list up to ten organizations: 1) from whom they have received information, advice, or expertise related to environmental stewardship in the past year; and 2) to whom they have provided information, advice, or expertise related to environmental stewardship in the past year. Table F.1, below, provides a breakdown in the percentage of actors by sector and jurisdictional scale for Baltimore and Seattle.

Using social network analysis they developed network graphs of the networks in the two cities (see Figure F.1). Both cities have a remarkably similar number of network actors identified. The Baltimore graphs (left side) shows fewer organizations with higher degree centralities (as represented by larger sized nodes). Romolini et al. also found a higher proportion of stewardship organizations in Baltimore to combine environmental stewardship with racial and social justice goals. This finding is explained through some of the historical background information found in the paper regarding the history of environmental stewardship in the two cities.

Table F.1 Distribution of Network Actors by Sector

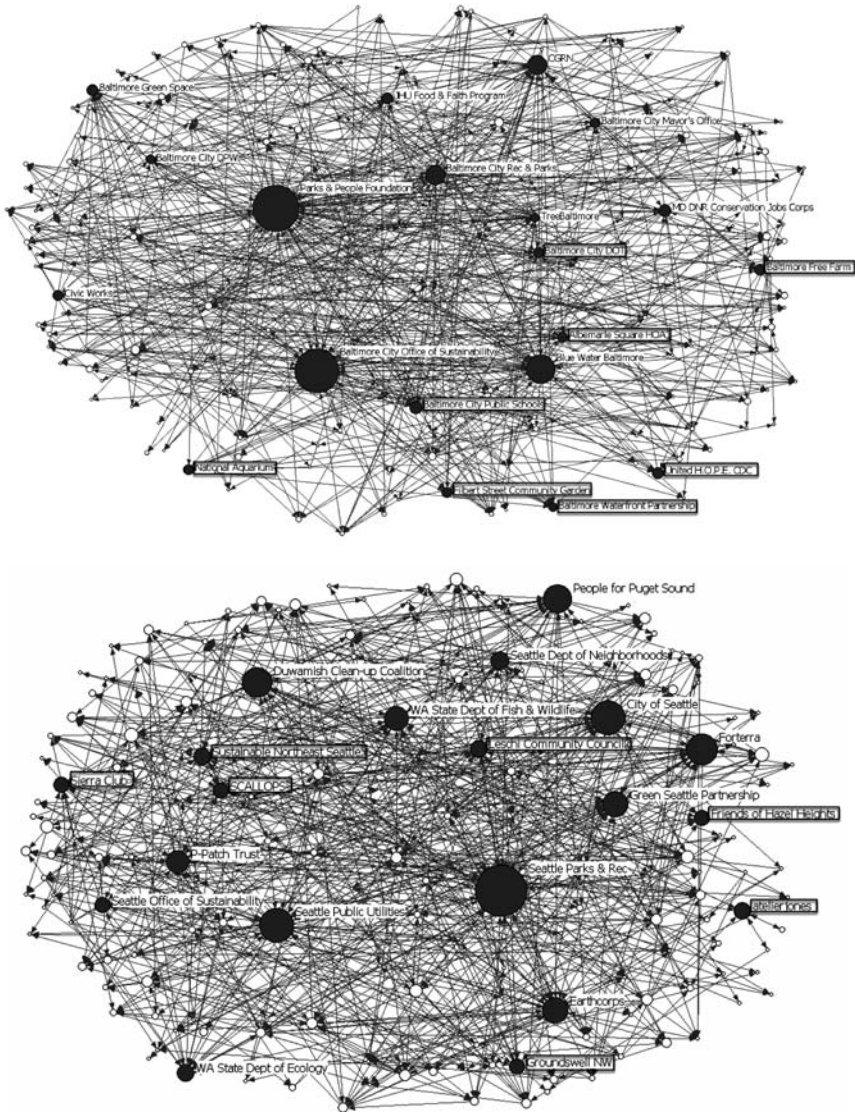
<i>Legal Designation</i>	<i>Baltimore (%)</i>	<i>Seattle (%)</i>
Public sector	18.4	20.8
Federal agency	2.5	2.8
State agency	1.2	4.2
Local agency	4.3	6.9
Public institution (not an agency)	1.8	2.8
Quasi-governmental	2.5	2.1
School district	6.1	2.1
Nonprofit sector	78.5	75.0
501 (c)(3)	49.1	52.8
501 (c)(4)	3.1	1.4
Community group w/o exempt status	26.4	20.8
Private sector	1.2	3.5
Other	1.8	0.7

This table provides a comparison between the sectoral compositions of organizations as a percentage of total number. Modified from: Romolini, M., Grove, M., Ventris, C., Koliba, C., and Krmkowski, D. (2016). Towards an understanding of citywide urban environmental governance: An examination of stewardship networks in Baltimore and Seattle, *Environmental Management*. DOI: 10.1007/s00267-016-0704-4.



Figures F.1 a–d Differences in Outdegree (top) and Betweenness (bottom) of Information Ties in Baltimore (a. and c.) and Seattle (b. and d.).

Node size indicates relative size of the centrality score of each node. Organizations with one or zero ties are not shown. Replicated with permission: Romolini, M., Grove, M., Ventriss, C., Koliba, C., and Krmkowski, D. (2016). Towards an understanding of citywide urban environmental governance: An examination of stewardship networks in Baltimore and Seattle, *Environmental Management*. DOI: 10.1007/s00267-016-0704-4.



Figures F.1 a–d Differences in Outdegree (top) and Betweenness (bottom) of Information Ties in Baltimore (a. and c.) and Seattle (b. and d.) (continued).

Some key findings and advances stemming from this study include:

- Surveys of environmental stewardship actors in Baltimore and Seattle were conducted (see Table F.1).
- Comparisons of the two networks (see Figures F.1 a–d) show considerable similarities between the two networks in terms of their relative sizes and distributions across sectors, but differences in the types of activities undertaken in each network. These differences can be explained by the demographics composition of the cities and the environmental conditions they face.
- This study provides a good example of how governance networks can be compared using mixed methods—network analysis and historical source document analysis.

APPLICATION G: THE ROLE OF POLICY TOOLS IN TASK COORDINATION IN PLANNED WATER QUALITY MANAGEMENT NETWORKS

Koliba, C., Reynolds, A., Zia, A., and Scheinert, S. (2015).
Isomorphic properties of network governance: Comparing two
watershed governance initiatives in the Lake Champlain Basin
using institutional network analysis. *Complexity, Governance &
Networks*, 1(2), 99–118. DOI: 10.7564/14-CGN12

Abstract

In this paper a comparison of the two planned networks that appear in watershed planning documents for the Lake Champlain Basin in 2010 is rendered using textual data mining techniques and institutional network analysis to produce measures of network centrality, a visual analysis of network structures and clusters, and statistical comparisons of the task structures found across the two planned networks. One plan (2010 Total Maximum Daily Load (TMDL)) was developed by a regulatory network initiated by the Environmental Protection Agency (EPA) and state legislature. The other plan (2010 Opportunities for Action (OFA)) was developed by a watershed partnership network spanning the governmental, nonprofit, and business sectors. This paper asks if these two planning networks reify themselves in the plans they create? The extent to which the structural and functional properties of the networks in this study are mirrored in the plans that they produce is measured. Institutional isomorphism theory is used to anticipate and explain any mirroring effects observed in the data. A comparison of policy tool identification, actor

characteristics, and task structures for each plan is rendered. A deeper exhortation of the relationship between policy tool selection and network structuration is examined. Advances for methods, theory, and practice are summarized. Findings suggest evidence of structural isomorphism, but not policy tool isomorphism occurring between the two planning regimes. Possible explanations for these findings are given.

Methods

Source document analysis; network analysis

The “blueprints” for governance networks can be sometimes found in comprehensive implementation plans drawn up to address a pressing policy need such as mitigating water pollution or the mounting of response and recovery efforts following a natural disaster. For instance, Kapucu and Garayev (2013) have culled network structures from emergency response plans. In a study conducted by Koliba et al. (2015), they examined and compared two plans designed to mitigate nonpoint sources of water pollution in the same geographic area: the Vermont portion of the Lake Champlain Basin. These two plans were originated by different, but overlapping, groups of constituencies.

The method used to pull out network data from these plans was one based on extracting explicit tasks from the texts of each plan. Figure G.1, below, illustrates how a lead partner, in this case, the United State Department of Agriculture (USDA-NRCS), was assigned the task of providing technical and financial

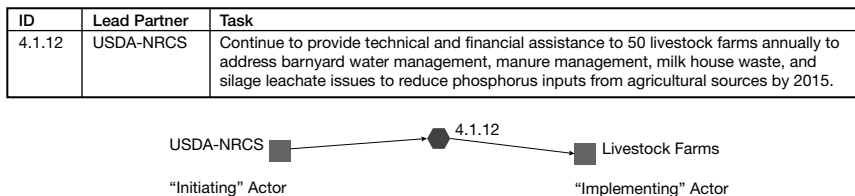


Figure G.1 Example of Task Text from OFA 2010 Plan and its Network Analytical Structure.

This figure reproduces a sample piece of text from the 2010 Opportunities for Action (OFA) plan and the types of network inferences drawn from it. Replicated with permission: Koliba, C., Reynolds, A., Zia, A., and Scheinert, S. (2015). Isomorphic properties of network governance: Comparing two watershed governance initiatives in the Lake Champlain Basin using institutional network analysis. *Complexity, Governance & Networks*, 1(2), 99–118.

assistance to polluting livestock farms. The small network graph in the figure illustrates this tie.

Figure G.2, below, provides a network graph of the network that was inferred in the 2010 Total Maximum Daily Load (TMDL) plan developed by the Vermont State Agency of Natural Resources in response to the Environmental Protection Agency (EPA) regulations. At the center of this graph is the agency (VTANR). This particular plan also mentioned an extensive list of organizations that were not explicitly tied to other organizations.

Figure G.3, below, represents a network graph of the network inferred in the 2010 Opportunities for Action (OFA) plan that was developed by the Lake Champlain Basin Program. This graph highlights the transboundary nature of the network, and represents the LCBP's larger concern with the entire lake basin, and not just the Vermont portion of the basin.

The networks inferred from both the 2010 TMDL and the 2010 OFA plans were compared. Table G.1, below, lays out the types of network actors by sector.

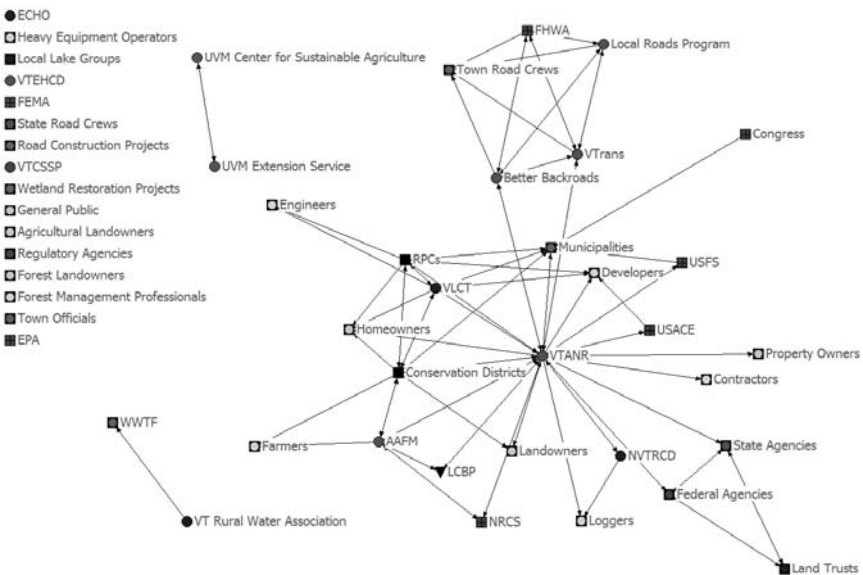


Figure G.2 Design “Blueprint” for a Phosphorus Mitigation Network Found in the TMDL Plan.

This figure provides a network graph of the structure of the network recommended in the 2010 TMDL plan. Note how the VTANR, the Vermont State Agency of Natural Resources, is centrally located. Replicated with permission: Koliba, C., Reynolds, A., Zia, A., and Scheinert, S. (2015). Isomorphic properties of network governance: Comparing two watershed governance initiatives in the Lake Champlain Basin using institutional network analysis. *Complexity, Governance & Networks*, 1(2), 99–118.

Table G.1 Frequency of Sector Attribute Values

Category	TMDL		OFA	
	Count	Percentage	Count	Percentage
Federal government	10	20.83%	6	8.33%
State/Province government	8	16.67%	6	8.33%
Regional government	3	6.25%	6	8.33%
Local government	6	12.50%	22	30.56%
Private enterprise	7	14.58%	11	15.28%
NGO/Nonprofit	6	12.50%	6	8.33%
Citizen	6	12.50%	9	12.50%
Researcher	2	4.17%	5	6.94%
International governing body	0	0.00%	1	1.39%
Total	48	100%	72	100%

This table provides a breakdown of network nodes within the 2010 TMDL and 2010 OFA plans, with highest concentrations of actors by sector highlighted in gray. Replicated with permission: Koliba, C., Reynolds, A., Zia, A., and Scheinert, S. (2015). Isomorphic properties of network governance: Comparing two watershed governance initiatives in the Lake Champlain Basin using institutional network analysis. *Complexity, Governance & Networks*, 1(2), 99–118, 20.

- Presents method for measuring network ties by drawing on descriptions of tasks outlined within each plan using an initiating and implementing task structure arrangement (see Figure G.1).
- Describes the governance network structures that are embedded within two water quality management plans covering the same geographic area (see Figures G.2 and G.3).
- Planned networks are analyzed for the number and configurations of actors by sector (see Table G.1) and policy tools used (see Table G.2).
- Institutional isomorphism theory is used to explain observable network patterns existing between those networks embedded in these plans, and the networks responsible for developing these plans.

Table G.2 Percentage of Land Use-Targeted Tasks that Utilize Policy Tools in OFA versus TMDL across Sectors

	Agriculture		Development		Forestry		Other		Full Plans	
	OFA	TMDL	OFA	TMDL	OFA	TMDL	OFA	TMDL	OFA	TMDL
		(n=80)		(n=48)		(n=2)		(n=63)		(n=193)
Economic regulation	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%
Env. regulation	32.5%	19.4%	20.8%	17.8%	0.0%	10.0%	9.5%	11.6%	21.8%	16.8%
Permits	2.5%	2.2%	14.6%	7.8%	0.0%	5.0%	0.0%	2.3%	4.7%	4.9%
Public information	33.8%	46.2%	52.1%	45.7%	50.0%	50.0%	74.6%	53.5%	51.8%	47.4%
Contracts	1.3%	2.2%	4.2%	2.3%	50.0%	0.0%	3.2%	2.3%	3.1%	2.1%
Grants	25.0%	16.1%	4.2%	10.1%	50.0%	15.0%	19.0%	11.6%	18.1%	12.6%
Loans and guarantees	0.0%	1.1%	0.0%	3.9%	0.0%	5.0%	0.0%	0.0%	0.0%	2.5%
Tax incentives	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.7%

This table provides a comparative breakdown of the policy tools used within each planned network broken down by functional area. The largest concentration of tools recommended in each plan is highlighted in gray. Reproduced with permission: Koliba, C., Reynolds, A., Zia, A., and Scheinert, S. (2015). Isomorphic properties of network governance: Comparing two watershed governance initiatives in the Lake Champlain Basin using institutional network analysis. *Complexity, Governance & Networks*, 1(2), 99–118.

Notes

- 1 (Clayton, 2002, p. 303).
- 2 See Birkland (2001) for a breakdown of policy tools introduced prior to the publication of *The tools of government* (Salamon, 2002c).
- 3 The issue network appears to be, conceptually, a scale-free form of governance network, a concept that we discussed in Chapter 5.

Chapter 7

Governance Networks as Complex Adaptive Systems

How do you hold a hundred tons of water in the air with no visible means of support? You build a cloud.

—K. C. Cole¹

In this chapter we describe governance networks in terms of complex adaptive systems. The application of systems frameworks to the description of governance networks allows us to consider a variety of internal and external variables that help shape the structure and functions of governance networks. By outlining the characteristics of the systems perspective, we may then build into the governance network analysis framework a way to assess some of the central questions of public administration and public policy in regard to the management, accountability, and performance of governance networks.

To build the foundation for examining governance networks through a complex systems lens, we first review the central features or characteristics of systems dynamics, highlighting the work of Daniel Katz and Robert Kahn (1978), and develop a general framework of systems dynamics embracing governance networks (see Figure 7.1). We then address the central features of the systems dynamic framework: (1) the permeability and openness of borders; (2) the importance of systems boundaries; (3) the role of inputs and outputs; (4) network processes; (5) distinguishing system output from outcomes; (6) identifying stocks and flows; and (7) feedback (both negative and positive). With these features in mind, we then examine feedback in governance networks from this perspective.

The feedback features of governance systems include feedback in a number of areas: policy tools, representative and interest group competition, administrative action, network accountability, and network performance. We close this chapter with a summary of network governance as a system's construct and highlight how governance networks can be viewed as a complex adaptive system.

System Characteristics and Dynamics

Historically, systems dynamics have been characterized by the input-processes-output-outcomes logic. A systems perspective also allows for the characterization of both positive (reinforcing) and negative (balancing) feedback that contribute to the regulation and governance of governance networks (Baumgartner and Jones, 1993). Systems theory has become a widely utilized framework for understanding organizations and social networks. Systems metaphors and concepts have been used across the natural and social sciences. Although there is some controversy around who originated systems theory, Ludwig von Bertalanffy (1950, 1968) is often credited with introducing general systems theory to English-speaking audiences (Midgley, 2000; Hammond, 2003), while systems dynamics theory is often credited with being founded by John Forrester (1958, 1970).

Systems theory has been used substantially across organizational psychology (Katz and Kahn, 1978; Mintzberg, 1979, 1983), organizational evaluation and intervention (Midgley, 2000), and management and organizational development (Scott, 1987; Senge, 1990). In public administration and policy studies, systems concepts have been applied to policy processes and subsystems (Baumgartner and Jones, 1993; Richardson, 1991, 2011), the articulation of governance systems (Pierre and Peters, 2005), planning and operations research (Forrester, 1997) and the study of emergency management networks (Comfort, 2002). Systems concepts are embedded in the performance measurement literature, particularly when the "standard vernacular" of process, output, and outcome measures is used (Frederickson and Frederickson, 2006). Systems concepts also enter into the literature pertaining to organizational learning (Senge et al., 1994; Argyris and Schon, 1995) and descriptions of how knowledge is managed across systems and subsystems (McNabb, 2007). Systems have been ascribed to the group (Senge et al., 1994), organizational (Katz and Kahn, 1978; Mintzberg, 1979; Scott, 1987), and interorganizational (Mintzberg, 1983; Comfort, 2002) levels.

Admittedly, there are quite a few differences between network and systems theory. For example, network theorists are more concerned about the treatment of nodes/actors and ties/relations among nodes; however, systems theorists may operate at higher levels of abstractions containing many clusters of nodes/actors within them. There is also a great deal of overlap between network and systems

theory and concepts (Koliba, Gerrits, Rhodes and Meek, 2016). Our discussion of multiple social scales, multiplex social ties, and operational and policy functions has been presented in light of assumptions regarding the relationships between parts of a network and the network as a whole. The principles of network holism are, essentially, assumptions derived from the basic tenets of systems analysis. Governance networks have boundaries and relationships with their external environments. They are shaped by input-output flows and feedback mechanisms. Governance networks are systems whose internal operations are shaped by forces and factors that occur as systems dynamics.

System dynamics may be distinguished from network dynamics as a shift in perspective and as a degree of abstraction. The kinds of network concepts we discussed in previous chapters presented network dynamics as the accumulation of relationships between a complex array of social actors and ties. Our discussion of the kinds of functions taken on across a governance network shifts our focus toward the kind of processes that contribute to the joint productions of common goals, aligned practices, and collective products—outputs as well as outcomes. *A systems view moves us from thinking exclusively of networks as configurations of nodes and links, to cycles of events and processes that materialize as the result of networked interactions.* We emphasize this important distinction in the closing sections of the chapter.

In their classic text *The Social Psychology of Organizations*, Daniel Katz and Robert Kahn provide an extensive introduction of general systems theory to the social sciences. In describing how organizations are systems, they introduce a set of common characteristics found in “open” systems. They assert that “systems theory is basically concerned with problems of relationship, of structure, and of interdependence rather than with the constant attributes of objects” (Katz and Kahn, 1978, p. 24). They describe social systems as “cycles of events” that unfold between parts or subsystems of the system. When considered in terms of cycles of events, “structure is to be found in an interrelated set of events which return upon themselves to complete and renew a cycle of activities. . . . It is events rather than things which are structured, so that structure is a dynamic rather than static concept” (1978, p. 24). “Events are the observable nodal points in such cycles, and can be conceptualized as structures” (1978, p. 6).

Figure 7.1 encompasses some of the basic system dynamics that we discuss in this section. We begin with a review of the literature pertaining to the permeability of network structures. We discuss how open social systems maintain exchange of resources with their wider external environments and the ways in which a network’s degree of openness relates to the kinds of boundaries that are established between governance networks and their external environment. The roles and influences of the external environment on a governance network are considered in light of the accountability structures that govern network actions.

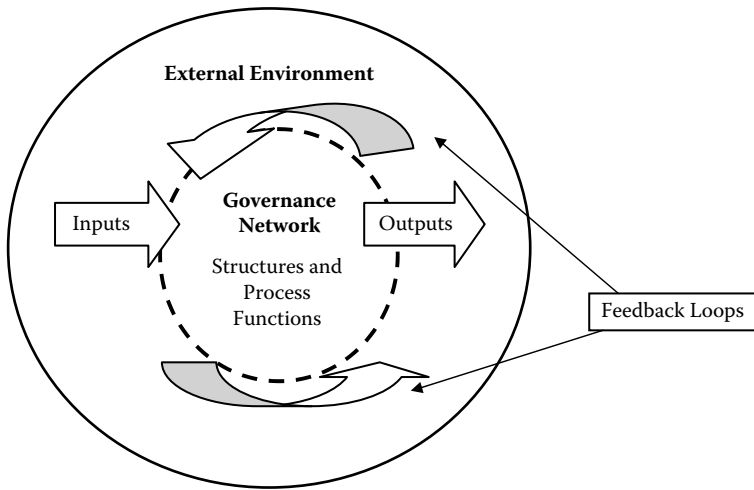


Figure 7.1 System Dynamics Impacting Governance Networks.

Systems are discussed here as relatively simplified models of reality (Miller and Page, 2007) that are arranged through a series of nested subsystems that are dynamic, adaptive, evolving, emergent, and resilient. More complex systems, which most governance networks are, defy simple linear explanation (Meadows, 2008).

Open social systems receive inputs from the external environment, which in turn shape the range of internal processes and functions taken on by different configurations of network actors. These inputs may be classified as capital resource inflows. We tie the processes and practices carried out within the “black box” of the network back to its operational and policy functions. A governance network will generate outputs that it shares or distributes to the external environment. These outputs may or may not lead to a set of intended or unintended consequences or outcomes. System dynamics emergence can be seen as a series of events involving an input \nrightarrow throughput \nrightarrow output \nrightarrow outcome process that is now common in organizational evaluation and performance management literature.

System Boundaries

In applying systems concepts to the study of social organization, Katz and Kahn conclude that “living systems, whether biological organisms or social organizations, are acutely dependent on external environments,” asserting that they “must be conceived as open systems” (1978, p. 208). “Unless ‘energy’ of

some sort is imported (see Katz and Kahn, 1978) into the social system that system will tend to break down” (Peters, 2008, p. 65). According to systems theorists an “open” system “means, not simply that it engages in interchanges with its environment, but that this exchange is an essential factor underlying the system’s viability, its reproductive ability or continuity, and its ability to change” (Buckley, 1998, p. 44). The importance of the external environment to the regulation of a social system has been long recognized as an important systems feature. As Mintzberg observes, “. . . external controls force the organization to be especially careful about its actions. Because it must justify its behaviors to outsiders, it tends to formalize [these external controls]” (1979, p. 290).

We have discussed the multiplex ties formed between two or more nodes. We may also view social ties in terms of their permeability or openness. Strong, formal ties give rise to tight bonds between actors, making it hard to bring new actors into the network. Granovetter’s classic discussion of the “strength of weak ties” is built on the premise that social systems, as living systems, will require some kind of exchange of energy or resources with their environment. Weak ties are more permeable, and in their capacity to break we find their value. Open systems with permeable boundaries possess a greater capacity to build bridges or links to nodes or entirely other networks. The more that a system limits its exchanges with its wider environment, the more closed and essentially bonded a network is.

Linze Schaap discusses this permeability as a matter of network closure. “Closure,” he observes, “occurs when certain actors are excluded from the interaction, for example because other actors fail to appreciate their contribution . . .” (Schaap, 2008, p. 118). He distinguishes between two kinds of closure: social and cognitive (Schaap, 2008, p. 119). “Social closure or exclusion means that actors are excluded from the interaction, excluded from membership of the governance network.” Social closure is related to the capacity of the governance network to include or exclude members. Schaap suggests that cognitive closure can occur “when knowledge, information, ideas, or proposals are ignored and denied access to the agenda” (Schaap, 2008, p. 120). Cognitive closure may exist even when social openness between parts of the system exists.

Schaap suggests that when closure is used to create social exclusion, it can be applied as a conscious and unconscious strategy (Schaap, 2008, p. 119). The capacity of a governance network to regulate its borders matters a great deal. “Closedness implies that steering signals [generated from the outside] do not penetrate into the system” (Kickert and Koppenjan, 1997, p. 55). The role of “steering signals” from their external environments is particularly relevant when accountability and governance structures are considered. Systems theory views these signals as feedback, a topic we will turn to later in this section.

The open or closed nature of governance networks may be found in discussions of differences between iron triangles, issue networks, and policy communities.

Criticizing the iron triangle as being too closed and narrowly construed, Hugh Heclo introduced the issue network as a way to account for the relatively scale-free and open nature of policy networks. He defined issue networks as being comprised of “a large number of participants with quite variable degrees of mutual commitment or of dependence on others in their environment. . . . Participants move in and out of networks constantly” (Heclo, 1978, pp. 102–103). “Issue networks tend to be the broadest, most extensive, and evanescent of the various kinds of networks” found in the public administration and policy literature (Gage, 1990, pp. 130–131). The clash or complementarity of interests between potential policy actors serves as the primary coupling force in issue networks. According to Koppenjan and Klijn (2004), issue networks form:

1. When the need for interaction arises for the first time between actors who were not previously aware of their mutual dependencies
2. When new problems or actors manage to penetrate existing networks, thus creating chaos so that new forms of consensus must be developed in order to tackle previously unknown, politicized problems, or to enable interaction between old and new participants
3. When problems cut across networks so that actors from different networks must learn to interact with one another (Koppenjan, 2008, p. 145)

Issue networks arise when two or more policy actors recognize the mutual dependencies that develop when conditions change, ill-structured, wicked problems materialize, or as the result of the fragmentation of an existing network. Issue networks may evolve into more formalized and closed policy communities (Rhodes, 1997). Policy communities tend to include “limited numbers of participants and a conscious exclusion of some groups” (Schaap, 2008, p. 112). Because of their closed nature, policy communities may tend to favor the status quo. In essence, policy communities tend to exhibit the closed qualities of iron triangles, but involve a potentially wider array of policy actors.

Governance networks exhibit qualities of openness and closedness that will likely be structured through a variety of boundary-forming and boundary-brokering activities, which in turn will likely have differential effects on the level of policy change from the status quo (Adams and Kriesi, 2007). This view of the permeability of governance network boundaries also allows for the possibility that some parts of the network may exhibit greater degrees of openness or closedness than others.

Boundaries, “no matter how negotiable or unspoken—refer to discontinuities, to lines of distinction between inside and outside, membership and non-membership, inclusion and exclusion” (Wenger, 1998, pp. 119–120). Boundaries appear in their most reified, official forms when the roles and capacities of particular network actors are distinguished or differentiated from one another.

Boundaries form when some measure of autonomy of the individual network actors is preserved. The old adage that good fences make good neighbors is salient here (Kettl, 2006, 2015). The walls that are erected between actors allow for each actor to maintain its identity (Wenger, 1998), and likely manage its functions and stocks of resources independently from the network as a whole, or at least to a certain extent.

We again note Donald Kettl's observations regarding the importance that boundaries and boundary formation play in the administration of democratic governments when he asserts:

The Constitution—in its drafting, its structure, and its early function—was a remarkable balancing act of complex issues, political cross-pressures, and boundary-defined responses. The boundaries were flexible because firm ones would have shredded the fragile coalition at the core of the new republic. For generations since, flexible, bend-without-breaking boundaries have been the foundation of American government. (2006, p. 11)

Kettl renders this observation during a time when the traditional, hierarchical boundaries of public bureaucracies are being broached by a cacophony of interorganizational governance networks that are bringing new private and nonprofit actors into the spheres of governance. The range of border-blurring activities taking place leads Kettl to be less concerned about their existence *per se*. Rather, he calls for greater clarity around determining which boundaries matter, how walls are erected, and to what extent the inevitable trade-offs matter when boundaries are drawn and redrawn.

Teisman and Edelenbos underscore the importance of boundary formation and boundary transformation as a critical feature of complex social systems. They view boundary definition as “a continuous process, challenging the idea of a stable equilibrium of effective governance policy, structure and processes” (2011, p. 103). Governance networks persist as temporally defined units that are constantly in a state of mutual adjustment and synchronization (see Kanwar et al.'s (2015) Application C for a longitudinal case study of a harbor governance network). Synchronization occurs in the interconnections “between different self-organizing and uniquely operating systems with their own logics, dynamics and values. The interconnections facilitate these operating systems to perform in such a way that coherent collective action can be realized that also fits in with their specialized goals” (Teisman and Edelenbos, 2011, p. 112). Elinor Ostrom's (2005) concept of “institutional diversity” is important here, whereby polycentric governance refers to the heterogenous capacity and power of diverse action arenas and governance networks to design and implement public policies (also see Zia et al., 2015). Institutions of differing rule structures and other features

interact, continuous adjustment between scales, sectors, and jurisdictional levels occurs (Teisman and Edelenbos, 2011).

Synchronization and mutual adjustments occur within the internal boundaries of a governance network, as well as at its edges. Internal boundaries are shaped by the nature of the multiplex ties formed between actors in the network. Internal boundaries form around particular role and functional differentiations that give a governance network its internal structure. In interorganizational networks like governance networks, boundaries will likely form around organizational and institutional distinctions as well as discrete operational, policy, and domain functions. We have briefly touched on a few of the differences when discussing the differences that sector goals play in determining which boundaries, and by inference, which accountability and performance measures, matter and why.

The external boundaries of a governance network may be very difficult to discern. Determining who is a member of the governance network or not may be difficult to tell, particularly in those governance networks that rely on more informal structures (Isett et al., 2011). If a governance network takes on some of the scale-free qualities of issue networks, it may be virtually impossible to determine where the network ends and its external environment begins. Recent research in “dark networks” also points out the difficulties of ascertaining network memberships, where networks are functionalized to deliberately prohibit connections across two or more degrees of separation among the network actors, e.g., tax fraud networks, drug networks, etc. (Raab and Milward, 2003; Everton, 2012). Interest group coalitions and public-private partnerships may also exhibit some of these qualities, particularly if there are formal or informal restrictions or barriers placed around who may participate in them.

“Border disputes” are perhaps most common when changes in intergovernmental jurisdiction exist. The structures and functions of intergovernmental and intragovernmental relations are subject to legislative or executive mandates, or the rise of wicked problems. We may point to the shifting nature of federalism and devolution as instances of the former, and the challenges of intergovernmental coordination following the landfall of Hurricane Katrina in 2005 (Cigler, 2007b) as an example of the latter. We also find the challenges associated with blurring borders across social sectors in the housing and banking crisis of 2008, during which debates concerning the nationalization of previously held private assets took place (Kettl, 2015), and during the BP oil spill in the Gulf of Mexico (Mills and Koliba, 2014).

At the other end of the spectrum, as in cases of regulatory subsystems or grants and contract agreements, the boundaries of the governance network may be prescribed in the language of enabling legislation, written regulations, or contracts (Kelman, 2002). In these cases, the boundaries of the network will likely exhibit more barriers to entry, as there are, after all, usually a limited

number of grants or contracts to be let, or a ridged set of criteria determining which entities need to be the subject of regulatory oversight.

In summarizing the importance of boundaries, Katz and Kahn observe that

system boundaries refer to the types of barrier conditions between the system and its environment that make for degrees of system openness. Boundaries are the demarcation lines or regions for the definition of appropriate system activity, for admission of members into the system, and for other imports into the system. The boundary constitutes a barrier for many types of interaction between people on the inside and people on the outside, but it includes facilitating devices for the types of transactions necessary for organizational functioning.

(Katz and Kahn, 1978, pp. 65–66)

There are several systems concepts that are important to determining how and to what extent boundaries are erected and, ultimately, broached. “Boundary objects” (Star and Griesemer, 1989) have been described as the “artifacts, documents, terms, concepts, and other forms of reification” that exist in social systems (Wenger, 1998, p. 105). Étienne Wenger has described boundary artifacts as the “nexus of perspectives” (1998, p. 107). Boundary artifacts may be the policy tools—the grants, contract, regulations, etc.—that dictate network membership (who is in/out). Other examples of boundary objects include websites (Doolin and McLeod, 2012), maps, reports, and computer simulation models (Waterhouse, Keast, and Koopenjan, 2016). Boundary objects may serve as inputs into the system or as discernible outputs of the system, particularly in cases where functions are carried out to build the capacity of others to expand and deepen ties.

Another systems concept that is important to boundaries and boundary setting is the instances in which boundaries break down, if only temporarily. Wenger refers to these as “boundary encounters” that occur when meetings and conversations are convened, and “brokering activities are allowed to take place” (1998, p. 112). It is important to note that boundary spanning occurs within the cycle of events that occurs in the social system. Boundary spanning occurs to build the internal cohesion within the governance network, as well as in instances when the governance network interfaces with its external environments.

Defining boundaries within governance networks can be a difficult task. When considered in terms of systems dynamics, Donella Meadows observes that “there is no single, legitimate boundary to draw around a system” (2008, p. 97). Graham Thompson echoes this assertion, stating that “a network is a way of reducing the effects of certain boundaries by creating other ones. So in this approach boundaries in networks should never be conceived as given—neither in terms of the existence of actors or the boundaries they create” (Thompson,

2003, p. 232). Boundaries and borders in governance networks are defined by discontinuities between actors and subsystems. Wenger observes:

Boundaries—no matter how negotiable or unspoken—refer to discontinuities, to lines of distinction between inside and outside, membership and nonmembership, inclusion and exclusion. Peripheries—no matter how narrow—refer to continuities, to areas of overlap and connections, to windows and meeting places, and to organized and casual possibilities for participation offered to outsiders or newcomers.

(1998, p. 120)

According to systems theorist, Donella Meadows, the ties that bind subsystems together tend to be stronger than network-wide, systems-wide ties. Stronger subsystem ties are important to system-wide stability. She notes, “If subsystems can largely take care of themselves, regulate themselves, maintain themselves, and yet serve the needs of the larger system, while the larger system coordinates and enhances the functioning of the subsystems, a stable, resilient, and efficient structure results” (Meadows, 2008, p. 82). She adds that “complex systems can evolve from simple systems only if there are stable intermediate forms” (Meadows, 2008, p. 83).

Meadows cautions that “when a subsystem’s goals dominate at the expense of the total system’s goals, the resulting behavior is called suboptimization” (2008, p. 85). “To be a highly functional system, [there must exist a] balance [of] the welfare, freedoms, and responsibilities of the subsystems and total system—there must be enough central control to achieve coordination toward the large system goal, and enough autonomy to keep all subsystems flourishing, functioning, and self-organizing” (2008, p. 85).

Discerning the boundaries between subnetworks within a larger whole network can be undertaken through the use of network analysis techniques. Empirically, subnetworks may be defined in terms of the types of ties—for instance, distinguishing between information sharing subnetworks from financial resource sharing networks (Scheinert et al., 2015) or based on the wider operating functions taken on.

Input-Output Processes

As cycles of events, we may dissect system dynamics into input, process, output, and outcome functions. Katz and Kahn discuss the role of input and output flows as critical characteristics of open systems, noting how social systems require the importation of energy to support systems activities and how, in turn, systems export energy that becomes the requisite pool of stock resources

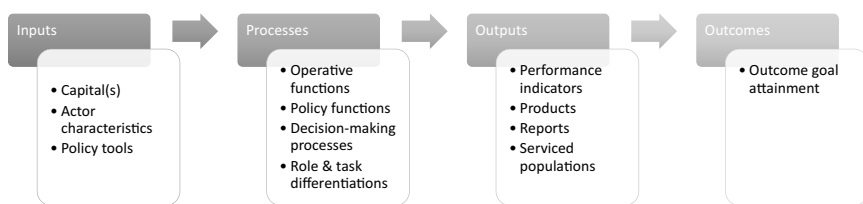


Figure 7.2 Systems Logic Model for Governance Networks.

available to other systems (1978). Breaking systems dynamics down this way is a widely accepted practice in program evaluation, manifesting in various versions of “logic models” (Poister, 2003). A version of the logic model is provided in Figure 7.2.

Inputs

Although Katz and Kahn view inputs in terms of flows of energy, we have been building the case for interpreting inputs as flows of financial, knowledge, physical, human, social, natural, political, and cultural capital resources. Figure 7.2 displays the ways in which the “currencies” found in the types of capital resources flow across nodes in a social network. Capital resources were described as stocks of capital that particular network actors have available to contribute to a network. A systems view of inputs also underscores the role that resources flowing from an external environment into the governance networks can play in shaping network activities. Thus, inputs exist as internal features of a governance network. Network membership may be predicated on the depth and breadth of resources that a network member will contribute to the operations of the whole. Inputs may also come from the external environment, passed on through to the governance network via the implementation of policy tools. For instance, a regulation formulated by an external legislative body may lead to the creation of regulatory subsystems designed around implementing their directives, while external funders may contribute financial resources to the operations of governance networks without becoming a member of the network.

Inputs may also appear as goals or expressions of will, derived from either external principals or internal network members. Goals are abstract expressions of prescribed values and beliefs. In later chapters, we interpret the goals and will of stakeholders as inputs that shape a governance network’s accountability structures and recognize that a governance network may render accounts to those internal members of the network, as well as those external to the network, such as broad swaths of atomized citizens and consumers.

Processes

Some models of input-output flows of systems describe the processes undertaken as a result of inputs comingling with actor characteristics and expressions of actors' desires and intentions as a black box. The link between inputs and processes, described by Katz and Kahn as throughputs, is formed when an open system transforms the energy available to it. These processes "entail some reorganization of inputs" (1978, pp. 23–24). "The throughput of an organization is its responses to the objective task posed by the needs of the environment" (1978, p. 245). The processes that unfold in a governance network are often very complex. They are shaped through a combination of operative and policy functions taken on within the network; the boundaries and network configurations guiding the interactions between network actors; the roles, tasks, and actions undertaken by network actors operating individually or collectively; and the decisions made to guide these processes and direct future actions.

The processes undertaken with the governance network will be shaped by internal governance structures (Provan and Kenis, 2008), as well as the informal and formal links between the "dominant coalitions" (Rhodes, 1997), advocacy coalitions (Sabatier and Jenkins-Smith, 1993), and "communities of practice" (Wenger, 1998) that shape the network's theories in use. These processes are shaped by the roles and tasks taken on by individual network actors as well as the manner in which decisions are made and implemented. In later chapters, we will discuss these processes in terms of the administrative roles and responsibilities taken on by network managers and the collaborative dynamics that unfold between communities of practice.

Outputs

Katz and Kahn suggest that "open systems export some product into the environment" (1978, p. 24). Outputs are generally capable of being measured or counted (the number of clients served, the number of workshops put on, etc.) or represented as tangibly reified objects that represent the products of collective action (reports, plans, etc.). A variety of network outputs are described in the literature: land use plans (Koontz et al., 2004), scientific reports (Koontz et al., 2004; Agranoff, 2007), forums (Agranoff, 2007), websites (Agranoff, 2007), program plans (Agranoff, 2007; Koliba, Wiltshire et al., 2016).

Although there has been some attention paid to process and outcome measures, the performance measurement movement has focused predominantly on the development of output measures to monitor workplace productivity. Frederickson and Frederickson (2006) have explored the role that performance measures play within governance networks operating within the health care arena, situating performance measurement within the context of descriptive (qualitative) to precise (quantitative) measures. We pick up on this issue in Chapter 11.

Outcomes

In the kind of governance networks that we have been exploring here, outcomes may be equated to network goals and purposes. The goals of particular actors are also likely brought into a network. In Chapter 10 we discuss how actor goals relate to accountability structures. The system outcomes implicated in governance networks may be framed in terms of meeting network-wide goals that should be closely tied to the functions and structures operating at a network-wide level. In Chapter 11 we discuss outcome measurement as one way to describe and ultimately evaluate network performance. Significant challenges to measuring outcomes have been noted (Radin, 2006). Policy goals are often tied to vaguely worded or articulated objectives (Stone, 2002) that may only be described qualitatively, defying measurement (Radin, 2006). In formal social networks like governance networks, network outcomes are a matter best understood as a complex, intersubjective terrain that is shaped through empirical evidence, social norms, and political processes. Within a systems context, this terrain may be described in terms of stocks and flows and feedback loops.

Stock and Flow Processes

One of the basic structures used to describe system dynamics is the relationship between stocks and flows. A common metaphor to describe the relationship between stocks and flows is the bathtub model (Meadows, 2008). In this model, a bathtub is viewed as a repository of a stock of something—in this case, water. Water enters or flows into the tub through a valve that is tied to some other reservoir of water. The valve can be turned on and off to control the amount of water flowing into the tub. At the bottom of the tub is a drain that can be opened and closed to adjust the amount of water that is in the tub. If the amount of water entering is the same as the amount exiting, the amount of water in the tub remains constant. It also remains constant when both the valve inflow and the drain are closed. When water from the tub is drained, it flows into some other basin (like a water treatment plant).

The field of system dynamics, dating back to the late 1950s (Forrester, 1958), has relied on stock and flow diagrams to model dynamic systems. Population modeling is now a common way of using stock and flow diagrams, particularly relating to health care and public health (Richardson, 1991). George Richardson used stock and flow modeling to demonstrate the relationship between the population of people susceptible to disease risk and the number of people who get sick. Healthy people serve as one stock. The infection rate serves as the valve moderating the rate of disease of transmission—identified in the (smaller) stock of people who become sick. A governance intervention that could be added to

this model is the introduction of vaccinations, which could, in turn, reduce the number of susceptible members of the population.

In governance networks a wide range of objects flow through the networks' capillaries. Stocks of information are the most ubiquitous objects to flow between two or more nodes of a governance network (Scheinert et al., 2015; Koliba, Wiltshire et al., 2016). Stocks of money may pulse through the network. Physical assets may be transferred, pooled, or shared. Human resources may be exchanged or pooled.

Linking the above discussion of inputs and outputs to the notion of stocks and flows, inputs may be viewed as those material resources that flow into some basin of process through metaphorical input spouts. These inputs are then processed, perhaps combined with other stocks of resources to generate some material output. This output may take the form of distinct material resources or some other tangible product, such as a program or project. Programs and projects result from the process of combining resources (funding, human capital, information, political will, social capital, etc.) through the coordination of tasks into material outputs (such as the number of citizens or clients served, the development of physical assets—roads and bridges, technological infrastructure, etc.).

Feedback Processes

The concept of feedback is a critical dimension of the system's dynamics (Richardson, 1984; Sterman, 2000). Most broadly, feedback is one way of characterizing the interactions between people, units, and data (Carver and Scheier, 1998, p. 11). Katz and Kahn view feedback as enabling a social organization to regulate its activities "on the basis of information about its functioning" (Katz and Kahn, 1978, pp. 55–56).

Figure 7.3 notes how the single loop has spaces within it for new inputs. These inputs help to control the system through feedback. In essence, feedback regulates the actions of the system. Regulation through feedback controls, or in the very least influences, the behavior of the system. Katz and Kahn describe feedback as "systemic information getting that is closely tied to the ongoing functions of the organization and is sometimes an integral part of those functions" (Katz and Kahn, 1978, p. 455).

Feedback loops are essential for maintaining the resilience of a system. Donnella Meadows has observed that "resilience is something that may be very hard to see, unless you exceed the limits, overwhelm and damage the balancing loops, and the system structure breaks down" (2008, p. 77). She goes on to add that "large organizations of all kinds, from corporations to governments, *lose their resilience simply because the feedback mechanisms by which they sense and respond to their environment have to travel through too many layers of*

delay and distortion” (Italics added, 2008, p. 78). The same may be said for interorganizational network dynamics as well.

A basic metaphor used to describe feedback within a system is that of the typical household heating system that regulates indoor air temperature. The thermostat takes continual readings of the air temperature. If the temperature falls below a certain threshold, a message is directed to the furnace to turn on. The regulator is the thermostat. The agent being regulated is the furnace. The outputs of the furnace not only impact the furnace’s functioning, e.g., whether it will need to increase the flow of oil or natural gas, but this feedback loop has a bearing on a wider environment, namely, the temperature of the house, which itself may be construed as a larger system. Figure 7.4 represents a schematic of a single-loop system.

Obviously, most systems are much more complex than systems designed to keep your home warm. Carver and Scheier point out that there may exist double- and triple-loop systems, some of which may be reinforced through a nested hierarchy of relationships. As systems add more inputs and outputs, many feedback mechanisms are at work, cycling into one another to guide the behaviors of the wider system. Examples of systems feedback can be represented in visualization of governance networks, as for instance found in Figure B.1.

There are now many fine examples of feedback loop diagrams that have been applied to complex policy and governance arrangements. An excellent example may be found in the open government system described in a study undertaken by the Center for Technology in Government. System dynamics modeling was used to describe the double and triple-loop feedback (Helbig et al., 2012) that unfolded

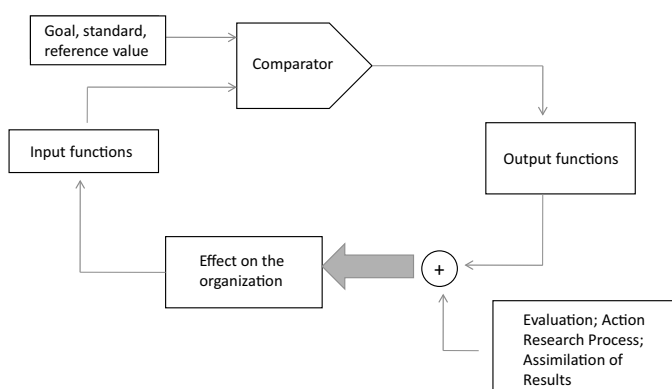


Figure 7.3 Principles of Feedback Control.

(Source: Carver and Scheier (1998). *On the self-regulation of behavior* (p. 11). Cambridge: Cambridge University Press.) Printed with permission from Cambridge University Press.

across a regulatory network focusing on the collection and use of restaurant health inspection data. Feedback in this work is described as the tasks and activities undertaken by different network actors to bundle, make accessible, and otherwise translate governance data into usable information for the general public.

Feedback operating within a system can also be construed as being either negative/balancing or positive/reinforcing in character (Baumgartner and Jones, 2002, p. 7). Negative feedback has been described as correcting forces that help align practices with a norm. While positive feedback can be construed as a reinforcing force that rewards certain outputs and outcomes, it should be noted that these labels do not carry with them value judgments about the relative worth or importance of the feedback—e.g., negative feedback is not, by definition, a form of feedback that is detrimental to a system's functioning. The same may be said for positive feedback.

Negative/Balancing Feedback

Negative feedback is best described in terms of controls placed over the system that come into effect when the system deviates from a goal. "When a system's negative feedback discontinues, its steady state vanishes, and at the same time its boundary disappears and the system terminates" (Miller, 1955, p. 521). The example of the regulation of household ambient air temperature illustrates the case of negative feedback. The norm or threshold ambient temperature is the goal. When the room temperature as measured by the thermostat falls below the goal or temperature target, the heating system reacts by turning the furnace on.

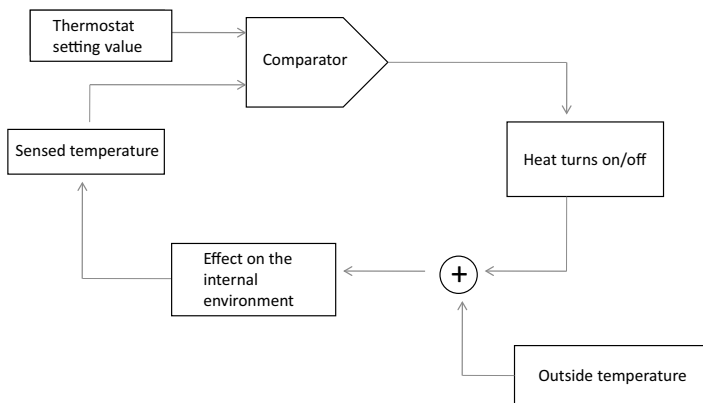


Figure 7.4 Principles of Feedback Control Applied to Home Heating System.

(Source: Carver and Scheier (1998). *On the self-regulation of behavior* (p. 13). Cambridge: Cambridge University Press.) Printed with permission of Cambridge University Press.

The elements of the system are altered to bring the system back into equilibrium or homeostasis. Similarly, in complex governance networks systems dealing with such policy domains as emergency management, when feedback information about the fragility or resilience of decaying infrastructure fails to reach emergency managers, exogenous shocks such as Katrina can result in system-wide collapse (Koliba, Mills, and Zia, 2011).

In the realm of governance networks, negative feedback can take the form of sanctions or punishments within social systems. The use of regulations to correct deviating behaviors and the role of incentives to reward desirable behaviors are often described as some of the basic building blocks of public policy. Within the context of social systems, negative feedback may come in the form of performance information that is received by the system that then enables the system to correct its deviations from course. In Chapter 11 we discuss how negative feedback may be used to describe how performance measures and performance management systems may be used to regulate governance network behavior.

Positive/Reinforcing Feedback

The central premise behind positive feedback is the notion that “success breeds success” or the “rich get richer.” In essence, positive feedback operates on rewards to the system. The more profit a firm earns, the more profit it will seek to earn. “A positive feedback mechanism includes a self-referencing process that accentuates rather than counterbalances a trend” (Baumgartner and Jones, 2002, p. 13).

In describing how positive feedback unfolds within a governance network, Baumgartner and Jones observe that “positive feedback processes come about when issues are reframed, when institutional designs are altered, and when policy makers come to realize that other policy makers may be looking at old issues in new ways” (Baumgartner and Jones, 2002, p. 27).

In governance networks, positive feedback generally occurs as the result of one of two forces: mimicking and attention shifting. According to Baumgartner and Jones, mimicking “operates when people observe the behavior of others and act accordingly” (2002, p. 15). Mimicking leads to fads, cascading, or bandwagon effects and has been associated with the concept of organizational isomorphism in sociology (DiMaggio and Powell, 1991). Attention shifting occurs as a result of the boundary rationality of individuals, or what Herbert Simon refers to as “serial information processing” (1966). “They attend to only limited parts of the world at any given time. Since one cannot possibly simultaneously be attuned to all elements of the surrounding world, people use various informational short-cuts in order to make reasonable decisions” (Baumgartner and Jones, 2002, p. 15).

Baumgartner and Jones observe that positive feedback contributes to the coupling of policy streams. They note that conditions do not automatically translate into problems; that translation occurs when previously ignored aspects

of a complex situation become salient, which occurs through the efforts of policy makers attempting to redefine public debates. They go on to add that the two mechanisms of positive feedback, mimicking and attention shifting, are “intimately related.” They describe a phenomenon of how “previously ignored attributes of complex public policies become salient in a policy debate, setting off a cascade of interest through the calculations of expected action” (Baumgartner and Jones, 2002, p. 23).

Feedback in Governance Networks

In discussing the interplay between negative and positive feedback within complex systems, Baumgartner and Jones note how Bendor and Moe (1985) have recognized “that in a negative feedback process, ‘success is self-limiting’ because the gains of one side lead to the mobilization of the opposing side. On the other hand, a different logic applies where positive feedback systems are operating: ‘In such a world, the positive feedback of the Matthew effect—“To him who hath shall be given”— creates an unstable system of cumulative advantages’ (1985, p. 771)” (Baumgartner and Jones, 2002, p. 13). Within governance networks negative and positive feedback loops combine, commingle, and sometimes counteract each other.

In social systems, feedback may be explicit or tacit. In addition to known and articulated logics used to guide group action, explicit feedback may be understood as the reified elements of an organizational behavior. Feedback manifests itself through artifacts and boundary objects, such as written rules, laws, strategic or action plans, standards, contractual agreements, and performance measures. Such artifacts may define the parameters through which feedback will be provided.

Many organizational development theories and frameworks have taken into account the role that tacit knowledge and communication play within organizational settings, including organizational learning (Argyris and Schon, 1995) and knowledge management theories (McNabb, 2007). Gregory Bateson first examined the role of tacit feedback within social systems through observing the behaviors of dolphins that developed new tricks in response to changes in rewards (1972). This phenomenon was eventually understood as “double-loop learning” (Argyris and Schon, 1995).

Governance networks are essentially governed through an array of negative and positive/balancing and reinforcing feedback mechanisms that take on both explicit and implicit dimensions, as well as empirical and normative ones. The medium through which feedback loops are communicated within governance networks takes many forms. The classical feedback mechanism within democracies is the policy tool selected by elected officials or public servants to solve a problem or, within the context of complex systems theory, achieve homeostasis within the

system. The legitimacy of representative democracy and interest group dynamics hinges on the role of feedback. Anticipating the critical considerations to be covered in later chapters, we discuss how administrative dynamics, accountability, and performance management systems can be construed in terms of systems feedback.

Policy Tools and Feedback

One of the basic premises behind the policy tools framework is the sense that policy tools play a vital role in structuring governance networks, dictating collective actions, and determining resource flows (Salamon, 2002b). Policy tools also shape how and to what extent feedback is used within a governance network (Baumgartner and Jones, 1993).

Within public administration, political science, and policy studies, the role of regulation is most often construed in terms of economic, environmental, and social regulation. Economic regulation is used in reference to the regulation of commercial or monetary activities. Social regulation usually takes the form of criminal and civil laws that seek to control or place parameters around social behavior and actions. Environmental regulation may exhibit qualities of both economic and social regulation that seek to promote behaviors and actions that are thought to be in the best interest of the natural environment. Within the discourses associated with public affairs, regulations, grants, and contracts are construed as policy tools (Salamon, 2002a; Howlett, 2005) that are implemented to achieve desired ends.

Regulations may be enacted as solutions to problems, acting as attempts to regulate behavior and actions through incentives and sanctions. Grants and contracts are made by principals to agents who agree to terms that lead to the agent performing some service (conducting research, processing claims, collecting trash) or providing some good (photocopy paper, a fleet of vehicles, a piece of equipment). The written contract explicitly defines the parameters through which feedback will be used to regulate the grant and contract agreement.

Taxes, loans and loan guarantees, and vouchers are policies that, in essence, regulate and/or incent the flow of financial resources within a governance system. Tax revenues provide the fuel through which the government functions. The intake of tax revenues gets regulated by elected officials who set tax rates and prioritize funding areas. Tax revenues provide a positive feedback mechanism for governance systems. Loans and loan guarantees and vouchers may be viewed as forms of feedback coming from government being directed at citizens. Vouchers, such as food stamps, may be awarded to citizens at a certain income threshold (gauged in terms of a determined poverty rate), essentially helping to correct income disparities that threaten the food security of vulnerable citizens.

Representation and Interest Group Competition as Feedback

Representative democracy is premised on elected officials serving as surrogates of their constituencies within a legislative or executive governance network. The legitimacy of representative democracy hinges on the premise that representatives receive feedback from their constituents, which in turn may influence the representative's actions. If they respond adequately to this feedback, they get reelected, reaping the rewards of a classic positive feedback loop. Representatives also receive feedback from lobbyists and special interests, taking the form of campaign donations.

Baumgartner and Jones discuss how Peltzman's (1976) theory of regulatory capture represents positive feedback working within the context of interest group competition within a governance network:

Members of these competing constituencies . . . support or oppose the political decision maker depending on the action he has taken. Where the decisions veer too far in one direction, the disfavored group mobilizes to show its own power, supporting a challenging candidate, for example. With political support distributed between the two competing constituency groups, the decision maker is constrained to operate only within a certain band of action. The result is an equilibrium outcome that illustrates the negative feedback processes common to many theories of politics and policy.

(Baumgartner and Jones, 2002, p. 9)

Citizens and interest groups have a critical and complex role to play in ensuring democratic accountabilities. Democratic accountability is, therefore, a very important, if not central tenet of democratically governed societies.

ETYMOLOGY OF THE TERM GOVERNANCE

The English word *governor* stems from the Latin *gubernator* and the Greek *kybernetes* ("helmsman" or "steersman"), which in origin stem from the Latin *gubernare* and the Greek *kybernan* ("to steer" or "to govern"). The recent English word *cybernetics* shares the same etymology! Strictly or etymologically speaking, the word *governor* is therefore supposed to be a metaphor derived from *steersman* (spiritus-temporis.com/governor/etymology.html, 2009).

Acts of Administration as Feedback

In Chapter 8, we discuss the role of public administrators as critical actors managing over and within governance networks. We describe feedback in the context of the administrative authority they wield, as well as the range of administrative tools, skills, and attitudes that collaborative and networked public administrators employ within governance networks. Whether it be through the execution of oversight and mandates, resource provision, negotiation and bargaining, facilitation, brokering, or systems thinking, the skills and strategies that public administrators, operating as network managers, exercise provide opportunities for the execution of feedback, most often at the interpersonal level.

The role that administrative actions play in guiding professional activities, including the extensive literature on leadership and management, provides a rich and complex picture of the role of feedback as it pertains to workplace motivation, workforce development, and organizational behavior. These individual level practices inform governance network operations and will be the subject of Chapter 8.

Accountability as Feedback

In Chapter 9, we define *accountability* in terms of feedback loops occurring between those to whom accounts are rendered and those rendering the accounts. We will note how and to what extent the characteristics of the accountability frame (democracy, market, and administrative) help to shape how feedback is structured and through what medium the feedback flows—in this case, as explicit standards or implicit norms.

Performance Measurement as Feedback

In Chapter 10, we define performance measurement and management in terms of feedback loops as well. Performance management systems that are integrated into governance networks facilitate feedback loops that rely on the flow of performance data to correct for deviations and reward desired actions and behaviors. Noted system theorist Ackoff recognized that

system performance depends critically on how the parts fit and work together, not merely on how well each performs independently; it depends on interactions rather than on actions. Furthermore, a system's performance depends on how it relates to its environment—the larger system of which it is a part—and to other systems in that environment.
(1980, p. 27)

Thus, the monitoring of system performance, both internally and externally, needs to be construed in terms of the conscious construction of data-driven as well as policy-framing feedback loops. As Beryl Radin and others have noted, just what accounts for high and low levels of performance is ultimately dictated by the construction of policy frames through an inherently political process. It is the combination of the technical capacities of data-driven decision making and the political capacities of policy actors that helps structure the feedback loops of governance networks. These feedback loops, coupled with network actor characteristics, the nature of the ties between them, network-wide characteristics, and other systems dynamics, give shape to governance as a systems construct.

The robustness of feedback loops operating within governance networks helps to dictate its stability. Baumgartner and Jones observe that “systems with more regular feedback processes built in are less likely to suffer extreme disruptions. To the extent that a system receives minor shocks on a frequent basis, it may be able to avoid major shocks” (Jones, 1994). They cite Berkman and Reenock’s research (2004), which has shown “where small-scale reforms are continually adopted, large-scale omnibus agency consolidations are less likely to occur. Where reforms are rare, they are more global when they finally do occur” (Baumgartner and Jones, 2002, p. 300). Baumgartner and Jones go on to assert that “systems designed to activate dormant interests when a system is under threat are more likely to survive more or less intact” (2002, p. 301).

Network Governance as a Systems Concept

Aware of the central features of system dynamics and some illustrations relating to governance networks, we can now turn to a fuller discussion of network governance as a systems concept. According to *Webster’s Unabridged Dictionary*, to “govern” means “to rule by right of authority; to exercise a directing or restraining influence over; to hold in check; control” (Webster’s, 1989, p. 612). An etymology of the term reveals that it stems from the Latin *gubernātor* and Greek *kybernan*, meaning “to steer.” The term *cybernetics* shares the same root as *govern*. The development of systems theory in the early twentieth century was undertaken with an aim toward discovering complementarity between human, mechanical, and electrical systems (Hammond, 2003). For engineers and mechanics, a “governor” is a “device used to maintain uniform speed, regardless of load.” In machines, governors play the role of comparators, regulating the flow of fuel or energy into the system. Governance in the context of public policy is decidedly more complex—as political factors, bolstered by human expressions of agency, free will, and ethics, make “regulating the flow of fuel or energy” to a given system challenging. In other words, governance of social systems is a decided “wicked problem.”

As we consider the relationship between system dynamics and governance, we find these parallels, as well as the overlapping meanings found in the roots of the words *govern* and *governors*, to possess a certain eloquence. The definition of *governance* that we are prepared to use throughout the rest of this book is therefore very much rooted in a systems framework. In this sense, governance needs to be understood in terms of the range of systems dynamics discussed in this chapter. To understand how the governance of any social structure operates, we need to clarify borders and boundaries, as well as the characteristics of these borders and boundaries, e.g., are they open or closed, permeable or impermeable? We may also ask: What are the inputs, processes, outputs, and outcomes over which, and through which, governance occurs? What are the stocks and flows of the system within which the network operates? Lastly, we are reminded of the fact that the study of governance at the systems level can be, essentially, understood in terms of the ranges of feedback loops, cycles, and mechanisms found within the system.

Rod Rhodes (1997) was one of the first scholars to deeply consider the relationship between governance and interorganizational networks, arguing that governance occurs as a “self-organizing phenomenon” shaped by the following characteristics:

1. *Interdependence* between organizations. Governance is broader than government, covering nonstate actors.
2. *Continuing interactions* between network members, caused by the need to exchange resources and negotiate shared purposes.
3. *Game-like interactions*, rooted in trust and regulated by the rules of the game negotiated and agreed upon by network participants.

We find elements of both classical network analysis and systems dynamics in this definition of governance. Governance is framed by the game-like interactions that give shape to the ongoing interactions of interdependent actors. These interactions are also shaped by the boundaries and borders constructed through them, inputs of resources, network-wide processes, outputs and outcomes ascribed to them, requisite stocks and flows of resources, and various feedback mechanisms and loops that provide the network to self-correct and be corrected. Rhodes’s three features of governance systems serve as a few of the “simple rules” that support the governance of complex governance networks.

Governance Networks as Complex Adaptive Systems

Governance networks are not simply systems, but rather *complex* systems capable of emergent qualities, adaptive to changing conditions, with the capacity to self-organize. A complex system is “one whose component parts interact with

sufficient intricacy that they cannot be predicted by standard linear equations; so many variables are at work in the system that its overall behavior can only be understood as an emergent consequence of the holistic sum of all the myriad behaviors embedded within” (Levy, 1993). Systems theory and complexity theory find a common denominator in the roles that feedback and interactions play as central factors in understanding society (Haynes, 2003, p. 90). Complex systems are understood as dynamic spaces governed by nonlinear processes. Donella Meadows notes how these “[n]onlinearities are important not only because they confound our expectations about the relationship between action and response. They are even more important because they *change the relative strength of feedback loops*. They can flip a system from one mode of behavior to another” (2008, p. 92). Thompson observes that “the non-linearity of complex systems means that small amounts of changes in inputs can have dramatic and unexpected effects on outputs” (2003, p. 136).

A central feature of complexity theory hinges on the notion that a few relatively simple rules can have tremendous effects on the behaviors of a system. These simple rules serve as the foundations of the development of “wildly diverse self-organizing structures” (Meadows, 2008, p. 80).

The consideration of governance networks as complex systems must allow for the development of the network-wide capacity to exhibit self-organizing qualities. According to Meadows, “the capacity of a system to make its own structure more complex is called self-organization” (2008, p. 79). Drawing on studies of complex adaptive systems in natural and social networks, Miller and Page suggest instances in which we “find robust patterns of organization and activity in systems that have no central control or authority. We have corporations—or, for that matter, human bodies and beehives—that maintain a recognizable form and activity over long periods of time, even though their constituent parts exist on time scales that are orders of magnitude less long lived” (Miller and Page, 2007, p. 7). In essence, we may understand self-organization as a property of both whole governance networks and particular subnetworks.

To illustrate this phenomenon we may draw upon applications of complexity to biological systems. Thompson applies a biological and evolutionary lens to the description of complex systems:

Multistranded clumped networks that form a kind of nonlinear (rhizome-like) organizational structure, containing different relational principles of connectivity and heterogeneity, are always “pregnant” with the possibility of breakdown and breakup, leading to new trajectories and transformations in a self-organizing framework that overcomes the twin obstacles presented by “necessary evolutionary advance” and “path-dependency.”

(Thompson, 2003, p. 11)

A picture of governance networks as organic, ever-evolving ecosystems of organizations, groups, and individuals emerges. Considering governance networks as not simply *complicated* social structures, but as *complex* social structures, brings certain distinct features into focus. Complexity, in this context, “is equated with the number of different items or elements that must be dealt with simultaneously by the organization (Anderson, 1999). But its distinctive feature is to stress the world as a system in construction, a dynamic formulation encouraging the notion of continual process of spontaneous emergence (Thrift, 1999)” (Thompson, 2003, p. 136).

Although some traditional applications of social network analysis view networks as static systems, or at least treats them as a one point in time or snapshot of reality, we have been describing governance networks as being “relatively stable and complex pattern[s] of relationships among multiple interdependent and self-organizing elements which also constitutes a self-organizing system as a whole” (Morcol and Wachhaus, 2009, p. 45). Goktug Morcol and Aaron Wachhaus have compared networks and complex systems and noted their conceptual similarities: “(a) . . . networks and complex systems are composed of multiple interdependent components (actors or agents); (b) both are relatively stable patterns of relationships, although complex systems are defined in more dynamic terms; (c) they are [both] self-organizing” (2009, p. 46). The value of applying the network structures of nodes and ties to the relationships between active agents operating within complex adaptive systems helps to make “the abstractions used by complexity theory concrete (Carroll and Burton, 2000; Costa et al., 2007)” (Mischen and Jackson, 2008, p. 316), meaning that the applications of network metaphors are particularly useful in developing a deeper understanding of complex governance networks parts and whole. This is an important consideration as we contemplate building our capacities to model complex governance networks (see Chapter 12).

The body of literature that has applied complex adaptive systems to the study of social phenomena is long and growing (see, for instance, Luhmann, 1995; Axelrod and Cohen, 1999; Marion, 1999; Holling, 2001; Gunderson, 2001; Haynes, 2003; Epstein, 2006; Miller and Page, 2007; Ostrom, 2009) and there are a number of key complexity concepts that are relevant to our discussion of governance networks. These concepts include the role of feedback discussed earlier in this chapter, as well as the principle of holism introduced in Chapter 2 (Degenne and Forse, 1999). Feedback loops operating within complex adaptive systems give shape to the interactions between agents (which is different from the interactions between variables as found in traditional stock and flow systems analysis (Newell and Meek, 2005)). Those wishing to study complex adaptive systems will be careful to avoid reductionism. Marion observes that, “Reductionism does not work with complex systems, and it is now clear that a purely

reductionist approach cannot be applied when studying life; in living systems the whole is more than the sum of its parts . . .” (Marion, 1999, pp. 27–28).

For the study of governance networks, the implication of the complex systems approach is that both reductionist and holistic approaches can yield improved understanding of governance operations and outcomes. Both approaches can be embraced but not at the expense of the other. In addition to feedback and holism, we may describe governance networks as complex adaptive systems by noting the latent capacity for self-organization and emergence, and the potential for designing robust and resilient governance systems.

Donnella Meadows defines self-organization as the “capacity of a system to make its own structure more complex” (2008, p. 79). Complex adaptive systems scientists understand that “. . . just a few simple organizing principles can lead to wildly diverse self-organizing structures” (Meadows, 2008, p. 80). These self-organizing capacities are a characteristic of the nonlinearity of their dynamics. Unlike the linear cause and effect models of standard systems analysis (as well as many of our statistical modeling methods), “. . . nonlinearity means a disproportionate relationship between variables [and agents]: a small change in one may trigger a large, disproportionate change in the other . . .” (Morcol and Wachhaus, 2009, p. 49). Self-organization is found in the emergence of new structures and functions. Miller and Page suggest that “. . . emergence is a phenomenon whereby well-formulated aggregate behavior arises from localized, individual behavior. Moreover, such aggregate patterns should be immune to reasonable variations in the individual behavior” (2007, p. 46). Thus, the emergence of new patterns of organization and behavior begin “from the bottom up” at the micro level, or in the case of governance networks, interpersonal level. This is why we are quick to privilege the roles of individual network administrators (Chapter 8), “accounters and accountees” (Chapter 9), and communities of practice designed to learn from performance data (Chapter 10). Our discussion of governance network administration is very much grounded in the view that a central role of individuals is to serve as the midwives of emergent properties through the use of certain skills and strategies, accountability relationships, and performance standards.

Self-organization is also characterized as the emergence of higher level order in otherwise chaotic systems (e.g., Holland, 1995; Kauffman, 2004). In conventional notions of systems, more chaos is equated with more disorder at all scales. In complexity theory, unanticipated orderliness and patterns of self-organization among the interacting elements in the system could emerge out of the chaotic behavior of individual elements (nodes) in the governance systems.

It is important to note that within social systems like governance networks, emergence “occurs when learning processes exist (Holland, 1995)” (Mischen and Jackson, 2008, p. 316). The relationship between emergent forms of self-

organization and learning become critically important when we consider the role that performance management systems play within governance networks. In Chapter 10, following Moynihan (2008), we argue that effective performance management systems are intentionally designed to operate within the context of network learning processes. In essence, effective performance management systems will be designed with a view to “harness complexity.” Axelrod and Cohen, in their classic book *Harnessing Complexity: Organizational Implications of a Scientific Frontier*, describe this process as “. . . deliberately changing the structure of a system in order to increase some measure of performance, and to do so by exploiting an understanding that the system itself is complex. Putting it more simply, the idea is to use our knowledge of complexity to do better. To harness complexity typically means living with it, and even taking advantage of it, rather than trying to ignore or eliminate it” (Axelrod and Cohen, 1999, p. 9).

The picture of governance networks as complex adaptive systems is a model of constant dynamism, with some components of the network (what we may construe as its subsystem) embarked on as processes of emergence and adaptation, with other components of the network remaining relatively stable and perhaps even actively resisting emergent functions and structures. Meadows reminds us that “Complex systems can evolve from simple systems only if there are stable intermediate forms” (2008, p. 83). These stable intermediate forms most likely exist at the meso levels of established organizations and institutions, and long-standing, institutionalized communities of practice.

Resilience in Governance Networks

The stability of some network actors can influence the stability of the network as a whole, or some portion of the governance network’s subsystem. Viewed through the lens of complex adaptive systems, these stable actors have more “fitness” than other network actors. Marion observes that “. . . fitness accrues to those who are best able to garner resources and that ability goes to organizations that can create mutually supportive networks with other systems; it does not accrue to those whose sole goal is to serve self at the expense of others. The motivation to elaborate, then, could be as simple as survival, and cooperation is the best tool for achieving it” (1999, p. 55). We may understand fitness of actors in terms of the need for interdependence. It is this structure of stability that allows for governance networks to maintain a certain measure of resilience, raising the fitness levels of both the whole and its component parts.

Meadows observes that the resilience of complex adaptive systems “is something that may be very hard to see, unless you exceed the limits, overwhelm and damage the balancing loops, and the system structure breaks down”

(2008, p. 77). Ascertaining the resilience of what appears to be a stable governance network becomes a critical feature in managing uncertainty and anticipating risk (Koppenjan and Klijn, 2004; Koliba, Mills and Zia, 2011; Zia and Koliba, 2011). This is why feedback becomes such an important dimension of network governance. “Large organizations of all kinds, from corporations to governments, lose their resilience simply because the feedback mechanisms by which they sense and respond to their environment have to travel through too many layers of delay and distortion” (Meadows, 2008, p. 78), and the same may be said for governance networks on the whole.

The resilience of complex governance networks becomes important to ensure that they can adapt to changing environmental conditions and to consistently provide reliable services. When governance networks fail to be resilient (as in the recent cases of failed emergency management networks); and when governance networks fail to adapt to changing conditions (as in the recent cases of financial regulation networks) the systems are no longer stable nor provide consistency in services. What are the reasons for systems that are not resilient? Sorensen and Torfing observe that “. . . the learning-based adaptiveness of governance networks might be impeded by the lack of capacities for experimentation, the conservative identities of actors who want to preserve the status quo, and the failure to resolve the internal conflicts between the actors that struggle over the assessment of experiments and the formulation of strategies for institutional reform” (2008, p. 105).

The work of Meek and Marshall (2017) offers insight into what they refer to as the “cultivation of resiliency” in governance networks. Their examination of water governance in Southern California is comprised of a wide range of water authorities consistently working to cultivate resiliency through “complexity friendly practices.” These practices (outlined in Chapter 11) contribute to the cultivation of resiliency. The key feature of these practices is system learning and adaptation. The significant research on planning with complexity emphasizes these leaning and adaptive practices. Similarly, Zia and Koliba (2013, 2017) use agent-based modeling to explore the notion of resilience in intergovernmental networks, whereby external or internal shocks may render some local governments unable to recover while others prove more resilient. Innes and Booher (2010) focus on governance systems as complex adaptive systems that rely on “collaborative rationality.” To develop collaborative capacity, the reliance on authentic dialogue develops reciprocity in relationships, learning among stakeholders, and creativity in solution development. This capacity leads to outcomes of shared meaning, innovation, and related heuristics that we identified in the work of Peter Senge earlier in this chapter. Leadership in these settings calls upon differentiated skills from governmental hierarchies. We will examine these leadership skills in the chapter that follows.

To view governance networks through the lens of complexity theory offers very important theoretical and practical potential. Addressing governance networks as patterns of relationships that evolve in ways that are unknown and uncertain gives rise to the notion of adaptive qualities of human relationships in governance. Here the ideas of “adaptive governance” (Folke et al., 2005), “adaptive management” (Gunderson, 2001; Norton, 2005), and “transitions management” (Loorbach, 2010) are important.

Thus governance network adaptation, as we noted early in this work, can work in positive and negative ways and gives rise to serious questions about governance network performance and democratic anchorage. As governance networks evolve, so will the need for an evolutionary pattern of democratic anchorage. On the pragmatic side, emergent and learning governance networks are exciting enterprises but they will also call upon new kinds of leadership and managerial practices to be viewed as both productive and accountable.

Over the course of the remaining chapters, we explore governance through three frames of reference that have been advanced within the public administration and policy studies literature. We view governance at the micro scale, in terms of the range of managerial and administrative roles and responsibilities found within the public administration field (Chapter 8). We explore how governance processes are shaped by certain sector characteristics and conclude that these characteristics need to be understood within the context of a robust accountability framework that is capable of accounting for the range of actors found within a governance network (Chapter 9). We then view governance in terms of expectations built up around performance by honing in on the potential role that performance data and performance management systems play in ensuring the governability of a governance network (Chapter 10). In Chapter 11 we view governance as a meso level concept that exists at the nexus of network configurations and system dynamics.

Applications

Two applications of complexity theory and complexity science are shared in the concluding section of this chapter. The first, Application H, focuses on the application of complexity theory to the study of water governance across a large metropolitan area of Southern California. The second, Application I, illustrates an agent-based model of transportation project prioritization governance across the State of Vermont. This latter application demonstrates how simulation modeling approaches can be applied to the study of governance networks.

APPLICATION H: METROPOLITAN WATER GOVERNANCE AS A COMPLEX ADAPTIVE SYSTEM

Meek, J. W., and Marshall, K. S. (2017). Cultivating resiliency through system shock: The Southern California metropolitan water system as a complex adaptive system.

Public Management Review

<http://www.tandfonline.com/doi/full/10.1080/14719037.2017.1364408>

Abstract

This study analyzes the water management system in Southern California through the lens of complexity theory as it responds to system stressors and shock caused by severe and sustained drought. The study is grounded upon the thesis that complex space is self-organizing space with the capacity to absorb spatial shock, and it is through this absorption process that the space experiences resiliency. This study identifies the attributes of spatial complexity of the Southern California metropolitan water management system, and analyzes a spatial shock case that ignited stakeholder action that nurtured, promoted, and furthered resiliency within the system. As an accumulation of initiatives, these stakeholder actions represent a governance system that cultivates system resilience.

Methods

Case study; interview; source document analysis

The coordination of the physical infrastructures (water energy, telecommunications, etc.) that are needed to sustain large urban systems relies extensively on the performance of governance networks. The degree of collaboration and coordination needed to keep the lights on and the water flowing in urban households unfolds amidst a vast array of stakeholders spanning the public and private sectors.

Applying a complex adaptive system's perspective to the description and analysis of the governance of the metropolitan water system of Southern California, Meek and Marshall (2017) discuss the relationship between the challenges of moving and purifying drinking water for millions of residents in a water challenged environment, with a stressed physical water infrastructure in

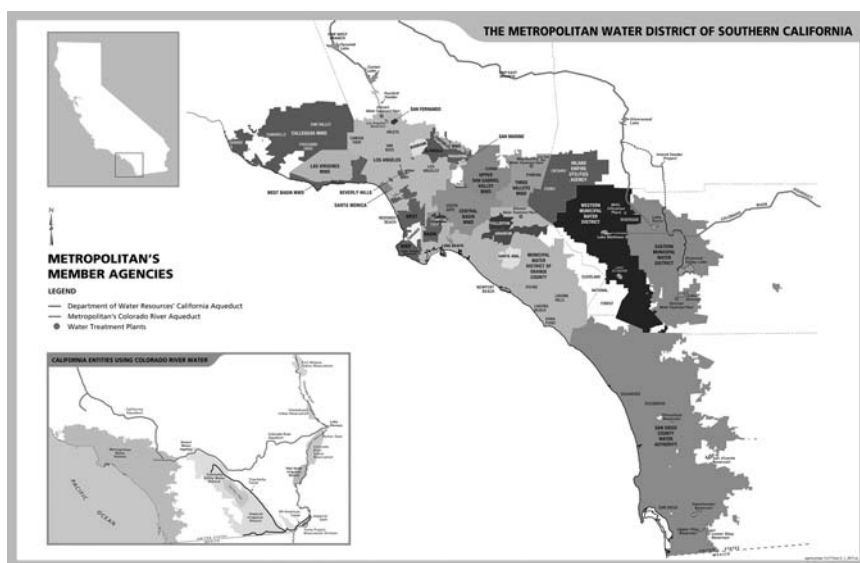


Figure H.1 Metropolitan Water District of Southern California Member Agencies.

This map displays the geospatial distribution of Metropolitan Water District actors. (Adapted from Meek, J. W., and Marshall, K. S. (2017). Cultivating resiliency through system shock: The Southern California metropolitan water system as a complex adaptive system. *Public Management Review*)

place, and across contested governance networks. Figure H.1, above, presents a geospatial map of the different water districts across this region.

Meek and Marshall (2017) apply some of the key features of governance networks as complex adaptive systems (see Table H.1, below, right column) to the water governance system of Southern California. This particular article demonstrates how qualitative case study analysis can be used to describe governance networks using complexity theory.

Key findings/advances:

- The role of stakeholder involvement and action in the water governance system is critical to cultivating resilience.
- Complex spaces are incredibly unwieldy, and rather than resist spatial complexity through intentional reductionist approaches, public administration, and management should not only embrace spatial complexity, but should also nurture and promote spatial complexity and thereby cultivate a sustaining and resilient environment (see Table H.1).

Table H.1 Water Governance as a Complex Adaptive System

<i>Water Governance In Southern California, USA</i>	<i>Complex Adaptive System Characteristics</i>
Users—urban, rural, businesses, corporations Interests—economic, ecological, environmental Forming alliances, partnerships, coalitions, policies Local, regional, economic, ecological combinations Ecological influences economic, influences practices, influences commons Conservation, land furloughs, planting changes, residential use, altered business orientations Incremental capacity building, resiliency	<i>Network of many agents</i> Multiple interconnected parts
	<i>System reflects an emergent quality</i> Elements have capacity of learning and changing
	<i>Many levels of interaction</i> Multiplicity of interconnections
	<i>No central controlling feature</i> Behavior is not uniform (or linear); not a sum of the parts
	<i>Evidence of system learning</i> New kinds of behavior—Emergence New behaviors influence the system

This table displays some of the key characteristics of a complex adaptive system and how the Southern California water district case is illustrative of these characteristics. (Adapted from Meek, J. W., and Marshall, K. S. (2017). Cultivating resiliency through system shock: The Southern California metropolitan water system as a complex adaptive system. *Public Management Review*.)

- Water governance systems must address spatial shock—such as severe or sustained drought—and seek to restore (and even advance) pre-shock spatial conditions.
- It is frequently perceived that crisis management is grounded on intentional design and advanced by reductionist approaches. And yet, experience often illustrates that it is actually manifested within complex adaptive spatial environments resistant to reductionism and intentionality.
- This case demonstrates that crisis management, and ultimately the spatial environment within which it manifests, actually benefits from practices that nurture, promote, and embrace spatial complexity.
- To embrace such practices requires a reframing of administrative intentionality. Rather than understand or approach spatial scarcity from a reductionist perspective of control through simplification and abstraction, a complexity-informed or friendly practice or approach requires more administrative reliance and trust on the emergent and adaptive outcomes of spatial complexity.

APPLICATION I: MODELING A TRANSPORTATION PROJECT PRIORITIZATION NETWORK AS A COMPLEX SYSTEM

Zia, A., and Koliba, C. (2013). The emergence of attractors under multi-level institutional designs: Agent-based modeling of intergovernmental decision making for funding transportation projects. *Artificial Intelligence (AI) & Society*. DOI: 10.1007/s00146-013-0527-2

Abstract

Multi-level institutional designs with distributed power and authority arrangements among federal, state, regional, and local government agencies could lead to the emergence of differential patterns of socio-economic and infrastructure development pathways in complex social–ecological systems. Both exogenous drivers and endogenous processes in social–ecological systems can lead to changes in the number of “basins of attraction,” changes in the positions of the basins within the state space, and changes in the positions of the thresholds between basins. In an effort to advance the theory and practice of the governance of policy systems, this study addresses a narrower empirical question: How do intergovernmental institutional rules set by federal, state, and regional government agencies generate and sustain basins of attraction in funding infrastructure projects? A pattern oriented, agent-based model (ABM) of an intergovernmental network has been developed to simulate real-world transportation policy implementation processes across the federal, the State of Vermont, regional, and local governments for prioritizing transportation projects. The ABM simulates baseline and alternative intergovernmental institutional rule structures and assesses their impacts on financial investment flows. The ABM was calibrated with data from multiple focus groups, individual interviews, and analysis of federal, state, and regional scale transportation projects and programs. The results from experimental simulations are presented to test system-wide effects of alternative multi-level institutional designs, in particular different power and authority arrangements between state and regional governments, on the emergence of roadway project prioritization patterns and funding allocations across regions and towns.

Methods

Agent-based modeling; focus groups; source document analysis

The processes used to keep our roads and bridges in working order and our highway traffic moving at an efficient pace requires the coordination of many actors. Transportation improvement projects are complicated feats of civil engineering that cost large sums of money. The design and prioritization of these projects can be a hotly contested process in which local, regional, and state officials advocate for/battle against specific strategic investments within a given region's transportation infrastructure.

Zia and Koliba (2013, 2017) studied how the roadway project design and resourcing process works within the State of Vermont. Beginning with extensive focus group work, they developing an initial “scoping model” of the transportation project prioritization network. Figure I.1, below, presents the network in a 3D plan schematic. Federal level actors (the United States Department of Transportation) are situated in the top layer, followed by state level actors (the Vermont

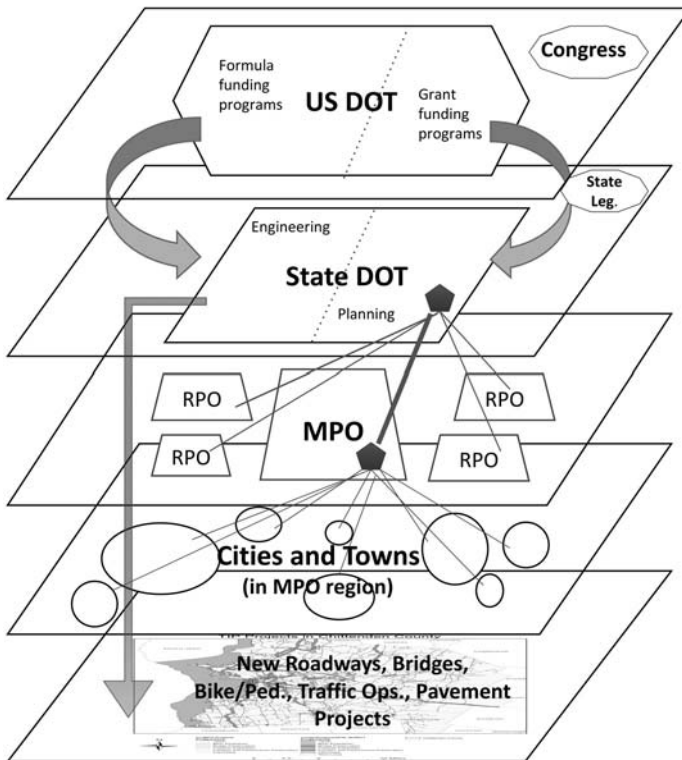


Figure I.1 Conceptual Model of the Transportation Prioritization Network.

Reprinted with permission: Zia, A., and Koliba, C. (2013). The emergence of attractors under multi-level institutional designs: Agent-based modeling of intergovernmental decision making for funding transportation projects. *Artificial Intelligence (AI) & Society*.

Department of Transportation). Regional planning organizations (RPOs) (sometimes identified as Metropolitan Planning Organizations (MPOs) for larger urban regions) and local cities and towns round out this conceptualization of the intergovernmental network responsible for transportation infrastructure development.

Using this initial scoping model as its foundation, Zia and Koliba constructed an agent-based model (ABM) of the project prioritization process. Figure I.2, below, illustrates how they nested projects inside of town agents, which were in turn nested in regional agents, which in turn were nested in a state agent. This approach to modeling the intergovernmental system this way is very similar to Deil Wright's "inclusive authority model" of intergovernmental relations (see Figure 6.5).

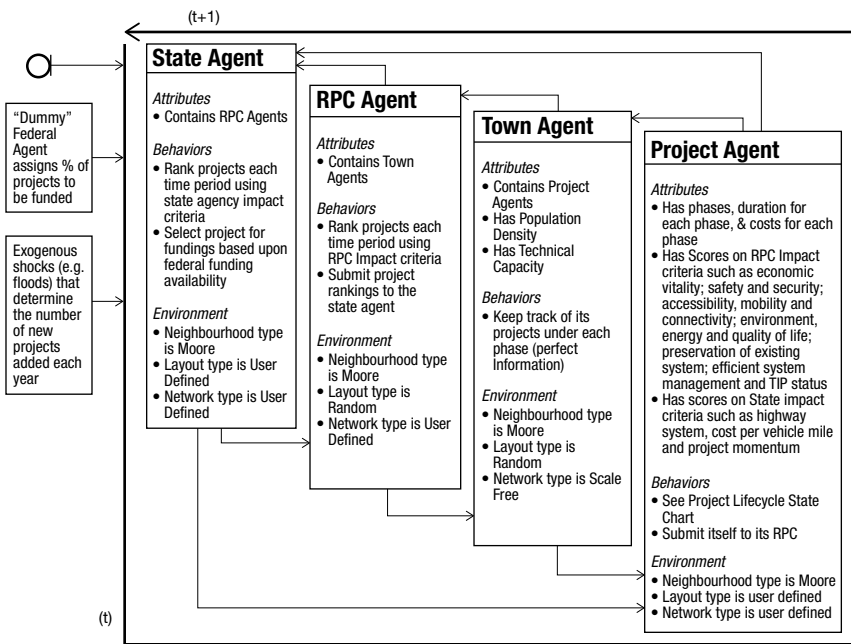


Figure I.2 The Internal Structures of the Stochastic ABM Showing Attributes, Behaviors, and the Environment of Four Agent Classes—State Agency, Regional Planning Commissions, Local Towns, and Projects.

This figure provides a visualization of the nested nature of intergovernmental relationships within this network. Projects are nested in local governments. Local governments are nested in regional planning commissions (and MPOs), and regional planning commissions are nested in one state agency. Reprinted with permission: Zia, A., and Koliba, C. (2013). The emergence of attractors under multi-level institutional designs: Agent-based modeling of intergovernmental decision making for funding transportation projects. *Artificial Intelligence (AI) & Society*.

Table I.1 Weighted Criteria Breakdown by Project Type

	State Level		Regional Level		
	Project Class	SDOT Criteria	Chittenden County		Other Counties
			MPO Criteria (applied across all classes)	Wt.	
Roadway	Highway system*		Economic vitality	.166 @	Ranked by priority from 1 (being the highest) to 5 (being the lowest)
	Cost per vehicle mile*		Safety and security		
	Regional priority		Accessibility, mobility, and connectivity		
	Project momentum		Environment, energy, and quality of life		
	Pavement condition index*		Preservation of existing system		
Paving	Benefit/cost*		Efficient system management		The availability, accessibility, and usability of alternative routes
	Regional priority				
	Bridge condition*				
Bridges	Remaining life*				The functional importance of the highway or bridge as a link in the local, regional, or state economy
	Functionality*				
	Load capacity and use				
	Waterway adequacy and scour suscept.				
	Project momentum				
	Regional input and priority				
	Asset-benefit cost factor				

Bike/ Pedestrian	Land use density	.20	The functional importance of the facility in the social and cultural life of the surrounding communities	
	Connectivity to larger bike/ped network	.10		
	Multi-modal access	.05		
	Designated downtown/village center	.05		
	Project cost	.20		
	Regional priority	.P20		
Traffic operations	Project momentum	.20	Conformance to the local and regional plans	
	Intersection capacity*	.40		
	Accident rate	.20		
	Cost per intersection volume*	.20		
	Regional input and priority	.20		
	Project momentum	.10		
Park and ride	Total highway and location*	.40	Local support for the project	
	Cost/parking space	.20		
	Regional input priority	.20		
	Project momentum	.20		

This table displays the weighting scheme adopted by the state to prioritize different types of transportation projects. The far right columns display weighting schemes of regional planning commissions. Reprinted with permission: Zia, A., and Koliba, C. (2013). The emergence of attractors under multi-level institutional designs: Agent-based modeling of intergovernmental decision making for funding transportation projects. *Artificial Intelligence (AI) & Society*.

*denotes Asset Management System

To capture how these “agents” make decisions about which transportation project to design, fund, and build, a table of the criteria used by the state and regional planning organizations to review and weight projects is outlined in Table I.1.

These weighted criteria are used to simulate how network agents at various levels of government review and analyze projects. Drawing on focus group data, the project prioritization process used by these agents was outlined in the statechart of the ABM, as seen in Figure I.3, below. The ability to capture the decision-making process of different actors within this governance network allowed Zia and Koliba to simulate investment and project development. The model was calibrated using historical funding data going back ten years in time.

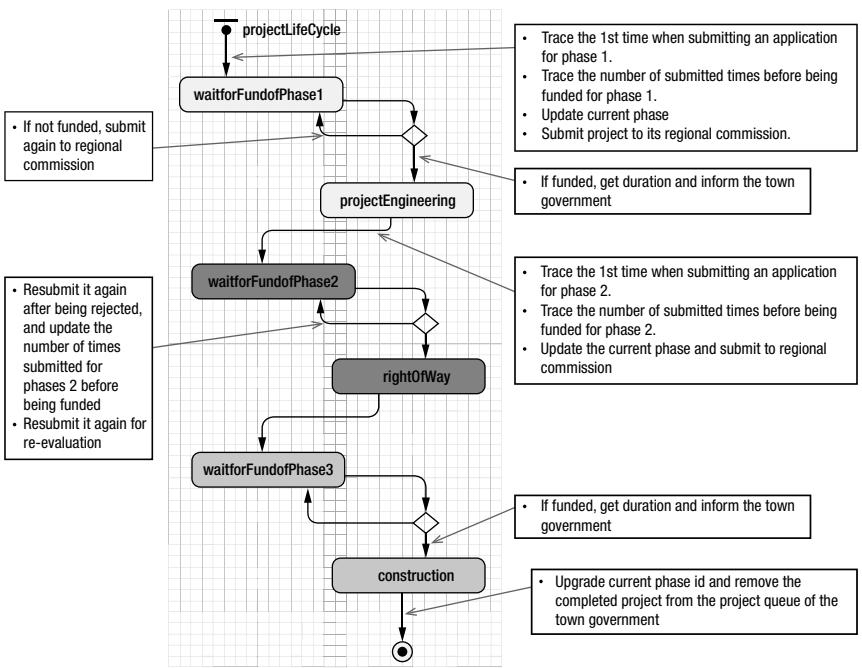


Figure I.3 ABM Statechart: Project Planning Feedback and Feedforward Path Dependencies.

This figure provides a detailed flow chart for how transportation project prioritization unfolds in this case. This flow chart was constructed following extensive engagement (via interviews and focus groups) with stakeholders. Reprinted with permission: Zia, A., and Koliba, C. (2013). The emergence of attractors under multi-level institutional designs: Agent-based modeling of intergovernmental decision making for funding transportation projects. *Artificial Intelligence (AI) & Society*.

Table 1.2 Parametric Values for Six Alternative Scenarios

<i>Parameter</i>	<i>Scenario 1 (Baseline)</i>	<i>Scenario 2 (Regional -ization)</i>	<i>Scenario 3 (Cost- effective)</i>	<i>Scenario 4 (Funding flux)</i>	<i>Scenario 5 (Seques- tration)</i>	<i>Scenario 6 (Seques- tration with shocks)</i>
Weight on regional proximity	0.2	0.5	0.2	0.2	0.2	0.2
Weight on highway system	0.4	0.1	0.1	0.4	0.4	0.4
Weight on cost per vehicle mile	0.2	0.2	0.5	0.2	0.2	0.2
Weight on project momentum	0.2	0.2	0.2	0.2	0.2	0.2
% of projects funded each year	0.1 (10%)	0.1 (10%)	0.1 (10%)	0.3 (30%)	0.05 (5%)	0.05 (5%)
Number of new projects added each year	30	30	30	30	30	40

This table demonstrates how six different scenarios were run using different weighting schemes, variations in percentage of projects funded, and some (in scenario 6) increase in the total number of projects funded. Reprinted with permission: Zia, A., and Koliba, C. (2013). The emergence of attractors under multi-level institutional designs: Agent-based modeling of intergovernmental decision making for funding transportation projects. *Artificial Intelligence (AI) & Society*.

As a computer simulation model of this governance network, certain scenarios could be designed to determine how resources would be allocated if the decision-making criteria were altered, and/or more or fewer resources were available to build more roadway projects.

Some key findings and advances stemming from this study include:

- This study asks: How do intergovernmental institutional rules set by federal, state, and regional government agencies generate and sustain “basins of attraction” in funding transportation projects?
- The major action arenas (see pentagrams in Figure I.1) responsible for prioritizing roadway projects are identified.
- This study advances the use of agent-based modeling to study governance design configurations. Agents are represented as nested intergovernmental actors (see Figure I.2).
- The project prioritization process is outlined in statechart form (see Figure I.3).
- The weighting scheme to prioritize projects is displayed (see Table I.1).
- Scenarios distinguishing between differing funding availabilities and weighting scheme configurations are compared (see Table I.2).

Note

- 1 (1999, p. 6).

Chapter 8

How Are Governance Networks Managed?

Good management is the art of making problems so interesting and their solutions so constructive that everyone wants to get to work and deal with them.

—Paul Hawken¹

In this chapter we focus on the role of one particular kind of network actor, the individual public administrator who takes on the role of network manager by either managing within the network or managing the network itself. In the opening chapter of the book we noted Donald Kettl's observations that as a result of the network turn in public administration, "the basic administrative problem [becomes] developing effective management mechanisms to replace command and control" (2002, p. 491). According to Kettl, networked public managers "have to learn the points of leverage, change their behavior to manage those points of leverage, develop processes needed to make that work, and change the organizational culture from a traditional control perspective to one that accommodates indirect methods" (2002, p. 493).

In this chapter, we focus on the roles that individual public administrators take within governance networks. We argue that as administrators *of* and *within* governance networks, public managers play a critical role in ensuring that democratic and administrative accountability exists across a governance network. Managing within networks brings a degree of complexity to administrative and managerial tasks and requires a variety of administrative tools and skill sets, some of which are embodied in classical views of administrative roles and responsibility, and others of which have surfaced as the result of an emerging understanding of collaborative and network dynamics. The picture of public administration within

a governance network context is one first described by Mathur and Skelcher as “responsively competent players in a polycentric system of governance” (2007, p. 231). The development of the governance network as an observable and, ultimately, analyzable phenomenon establishes management and administrative practices that contribute to a richer understanding of cross-jurisdictional relations that are characterized by both vertical and horizontal relations.

In this chapter, we discuss the management of governance networks through the context of the major paradigms of public administration theory and practice. We suggest that a picture of governance network management emerges when the three existing paradigms—classical public administration, new public management, and collaborative public management—combine into an emergent framework of governance network management.

The Convergence of Public Administration Paradigms

Three public administration paradigms that have existed within the field converge into an emerging fourth paradigm that has been described as “network management” (Kickert and Koppenjan, 1997). Although there have been several other paradigms that might be added here, including the new public administration and the new public service movements, we focus on classical public administration, new public management, and collaborative public management paradigms because these frameworks contribute different outlooks on what accounts for administrative authority. We make the argument that these three paradigms converge to provide an emergent governance network management paradigm. Table 8.1 lays out the differences between the four public administration paradigms.

Classical Public Administration in the Network Administration Paradigm

The classical view of public administrative practices is one that takes place prominently within public bureaucracies through the implementation of hierarchical administrative authority. Hierarchical authority can exist within governance networks. Classical public administration (PA) considerations of public bureaucracies and command and control forms of management are still very relevant, as public bureaucracies still play a very pivotal role, even within the most highly decentralized governance networks (Agranoff, 2017). Hierarchical arrangements that have been the mainstay of classical public administration theory are critically important to the management of networks for several reasons:

Table 8.1 The Convergence of PA Paradigms into Governance Network Administration

<i>Public Administration Paradigm</i>	<i>Dominant Administrative Structure</i>	<i>Central Administrative Dynamics</i>
Classical public administration	Public bureaucracies	Command and control
New public management	Public bureaucracies or private firms	Competition; concession and compromise
Collaborative public management	Partnerships with private firms, nonprofits, and citizens	Collaboration and cooperation; concession and compromise
Governance network administration	Mixed-form governance networks	Command and control; competition; concession and compromise; collaboration and cooperation; coordination

Source: Adapted from Birkland, *An Introduction to the Policy Process: Theories, Concepts, and Models of Public Policy Making*, M. E. Sharpe, New York, 2001, p. 47.

1. *Hierarchical authority may persist within the organizational culture of individual network actors.* In Chapter 3 we argued that when bureaucracies participate within governance networks, the individuals representing their bureaucracy's interests must "serve two masters." They must be bureaucratically and politically accountable to their bosses and supervisors, as well as be collaboratively accountable to their network partners representing other organizations. To this end, the picture of network management that we paint here must account for the fact that the individual public administrator will likely need to not only survive within the command and control context of his or her home organizations, but also negotiate these vertical arrangements and cultures in an effort to ensure that the interests of the home organizations are accounted for within network-wide functions and structures.
2. *Hierarchical authority may persist at the network-wide level, between actors within the network.* Our discussions of intergovernmental relations, regulatory subsystems, and grant and contract agreements underscored the need to acknowledge that not all network ties are horizontal in nature.

In some instances, a lead organization must exert control over other organizations in the network, either because of the need to seek constitutional and intergovernmental compliance, regulatory compliance, or as a function of effective contract oversight. Public administrators operating within intergovernmental networks, regulatory subsystems, or grant and contract agreements may wield power over other network actors. In other words, public administrators may be “principals” within one or a series of principal-agent relationships. In writing about the persistent need for the execution of vertical authority in grant and contract agreements between governments and private or nonprofit contractors, Phillip Cooper observes that it is important to recognize, and thereby manage, “the way that decisions get from the democratically elected political process through appointed executives and down through agencies to the contracting officer who is ultimately authorized to negotiate needs of the community and then to commit its resources in a legally binding relationship” (Cooper, 2003, p. 28). By the same token, public administrators may need to be subordinate to the authorities of other organizations within the network. In other words, public administrators may serve as agents to other principals.

In both of these cases, the administrative dynamics described within the classical public administration literature are not only relevant, but of critical importance. We refer the reader to our discussions of principal-agent theory in Chapter 4 for deeper elaborations on these points. In this chapter we account for the role of hierarchical authorities within our discussions of mandating and oversight authorities.

New Public Management in the Network Administration Paradigm

Because governance networks often include actors from multiple social sectors, including those private firms guided by markets and market forces, the new public management (NPM) foci on public-private partnerships, contracting out, and reliance on market forces need to inform the study of governance networks. NPM became popular beginning in the late 1980s with the era of privatization undertaken during the Reagan administration, and extending into the early 1990s, during the height of the Clinton administration’s “reengineering government” reforms. The central premise behind NPM is to bring market efficiencies to the delivery of public goods and services. Klijn and Snellen (2009, p. 33) summarize the assumptions inherent to the NPM paradigm this way:

- A strong focus on improving the effectiveness and efficiency of government performance

- A strong focus on ideas and techniques that have proven their value in the private sector
- A strong focus on the use of privatization and contracting out of governmental services, or (parts of) governmental bodies, to improve effectiveness and efficiency
- A strong focus on the creation or use of markets or semimarket mechanisms, or at least on increasing competition in service provision and realizing public policy
- A strong interest in the use of performance indicators or other mechanisms to specify the desired output of the privatized or automated part of the government or service that has been contracted out

In Chapter 1, we discussed how privatization and contracting out have contributed to the evolution of governance networks. In Chapter 6, we recognized how the move toward indirect governance has led to the proliferation of grant and contract agreements and public-private partnerships. The emphasis that the NPM paradigm has placed on utilizing market mechanisms to engender greater efficiencies and better performance results cannot be divorced from the conceptualization of network management that we describe here. On one level, “the genie is out of the bottle.” Contracting out is very much a reality that is not going away. Although we note, as many others have done, that network management is *not* synonymous with NPM, we need to keep in mind that NPM principles and practices are relevant for at least two reasons:

1. *The role of market forces and competition within governance networks needs to be accounted for.* The NPM concentration on the incorporation of market mechanisms in the delivery of public goods and services needs to be integrated into a conceptualization of network administration. The lessons learned from the implementation of sound contracting practices and the instances in which privatization has led to better services at cheaper costs speak to the continued relevance of NPM (Donahue, 1989; Savas, 2005; Donahue and Zeckhauser, 2011).
2. *Interest in monitoring network performance is a critical feature of sound network management.* In Chapter 10 we discuss the performance management and measurement movement and its relevance to governance network theory and practice. As Moynihan (2008) has noted, this movement has its roots in NPM. Although we cite how performance measurement has been critiqued as sometimes ignoring the bounded nature of rationality (e.g., performance measurement existing as an overly rationalized ideal type that ignores the social construction of knowledge and the politicized nature of problem and solution framing) (Radin, 2006), the attention that NPM brings to performance management is a major contribution to network management.

In laying the foundation for distinguishing NPM from network management, Klijn and Snellen observe how “NPM attempts to dismiss or reduce [the] complexity [found within networked arrangements] by abstaining from detailed [study] of governance, and focuses instead on governing by output criteria and organizing the playing field” (2009, p. 34). They go on to add that as a result, “the manager tries to keep as far away as possible from the complex realities of the interaction system itself. It treats the system as a black box and reacts to the emerging characteristics of the system by changing the output criteria” (2009, p. 34). Network managers must consider much more than tinkering with output criteria. They need to “get inside” the black box, understand it, and when possible, interject themselves as active agents of influence.

Collaborative Public Management in the Network Administration Paradigm

The third paradigm of importance to network management is collaborative public management (CPM), which has focused on the skills of the public manager in collaborative settings. Robert Agranoff and Michael McGuire introduce collaborative management as “a concept that describes the process of facilitating and operating in multiorganizational arrangements to solve problems that cannot be solved, or solved easily, by single organizations. Collaboration is a purposive relationship designed to solve a problem by creating or discovering a solution within a given set of constraints” (Agranoff and McGuire, 2003, p. 4). The importance of collaborative skills, collaborative processes, and collaborative governance strategies for public administrators has been the subject of a great deal of literature, beginning with Axelrod’s application of game theory of cooperative behavior (1980), Barbara Gray’s articulation of collaborative processes (1989), the development of collaborative governance (Ansell and Gash, 2008) and collaborative governance regimes (Emerson and Nabatchi, 2015), and extending into the literature concerning collaborative public management (Bingham and O’Leary, 2008).

Rosemary O’Leary and Lisa Blomgren Amsler (formerly Bingham) have noted the paradoxical nature of collaborative management (2007, 2008), observing that collaborative managers must work with both autonomy and interdependence; collaborative managers have diverse and common goals; they must work with both a fewer number and a greater variety of groups that are increasingly more diverse; and they need to be both participative and authoritative. Within some of the collaborative management literature the possibility that collaboration is mixed with more vertical forms of authority is raised. Agranoff and McGuire differentiate between vertical and horizontal collaborative activities, suggesting that collaborative management is not relegated to the management of horizontal ties built solely through voluntary engagement. Their comprehension of

COLLABORATIVE PUBLIC ACTION TOOLS

Vertical Collaboration Activities

Information seeking

- General funding of programs and projects
- New funding of programs and projects
- Interpretation of standards and rules
- General program guidance
- Technical assistance

Adjustment seeking

- Regulatory relief, flexibility, or waiver
- Statutory relief or flexibility
- Change in policy
- Funding innovation for program
- Model program involvement
- Performance-based discretion

Horizontal Collaborative Activities

Policy making and strategy making

- Gain policy-making assistance
- Engage in formal partnerships
- Engage in joint policy making
- Consolidate policy effort

Resource exchange

- Seek financial resources
- Employ joint financial incentives
- Contracted planning and implementation

Project-based work

- Partnership for a particular project
- Seek technical resources

Source: Agranoff and McGuire (2003). *Collaborative public management: New strategies for local governments* (pp. 70–71). Washington, DC: Georgetown University Press.

GRAY'S ADMINISTRATIVE BENEFITS TO COLLABORATION

- Broad comprehensive analysis of problem domain improves the quality of solutions.
- It ensures that interests are considered in any agreement and that acceptance of the solution is greater.
- Parties retain ownership over a solution.
- Mechanisms for future coordination can be established.

Source: Paraphrased from Gray (1989). *Collaborating: Finding common ground for multiparty problems* (p. 21).
San Francisco: Jossey-Bass.

collaborative management appears to be very similar to the description of network management found in the literature.

What distinguishes collaborative management as a unique paradigm is the emphasis placed on the role of the collaborative manager as enabling greater citizen participation. According to Lisa Bingham, Tina Nabatchi, and Rosemary O'Leary (2005, p. 548) the central questions being drawn in collaborative public management are: How does one best coordinate multiple players and stakeholders in indirect government and networks? How and when does a public manager attempt to engage the public and how broadly? Which forms of citizen or stakeholder engagement are most effective? Thus, collaborative public management as a paradigm places emphasis on participatory processes that enable citizens to better influence the actions of the governance networks in their midst. To this extent, CPM has much in common with the new public service framework advanced by Denhardt and Denhardt (2003). The collaborative public management paradigm privileges collaboration grounded in a strong normative foundation of democratic participation and deliberation. To this extent, CPM serves as the counterweight to NPM, which relegates citizen involvement to the realm of customer service and customer satisfaction.

Role Dualities

Effective network managers may manage within a network as well as manage over a network. It is possible that at different points in time, the scale of management can switch, forming instances of managing within and other times managing over. Brint Milward and Keith Provan were the first to distinguish network management

practices occurring at two levels of scale within an interorganizational network (1998, 2006). Network management occurring within networks is undertaken during the course of routine, operational interactions between members of a network. These interactions may take the form of exchanges between initiators and implementers, peers to peers, partners to partners, principals to agents, contractors to contractees, regulators to regulatees, etc. These exchanges occur at the interpersonal level, as exchanges and relationships between individuals. Individual discretion is exercised at this operational level.

In those instances when network managers manage over networks, strategic and tactical decisions are being made that provide some steerage over the direction of the whole network. Tactical decisions operate at the junction of lower level operational decision making and higher level strategic decision making. Tactical decisions are made to translate strategic decisions into the routine operational decisions that comprise the daily life blood of network activity.

A Governance Network Administration Paradigm

Borrowing characteristics of each of the three previous paradigms, a picture of network administration is emerging that can be described as the combination of network governance and public management under conditions of interdependence. From the interdependence perspective, network administration is aimed at “coordinating strategies of actors with different goals and preferences with regard to a certain problem or policy measure within an existing network of inter-organizational relations” (Kickert, Klijn, and Koppenjan, 1997a, p. 10). We argue that effective network management requires an understanding of all forms of administrative dynamics, including command and control, competition, negotiation and bargaining, and collaboration and cooperation. All three public administration paradigms described above are useful to the study of governance network administration and represent a confluence of perspectives that offer opportunities for integration by network participants, including public managers. It is the role of the public manager in governance networks, characterized by intersecting administrative dynamics, that we will examine next.

Determining the role of the public administrator in governance networks has received a great deal of attention in recent years among a number of scholars. It now seems clear that managing governmental hierarchies is not synonymous with managing in governance networks. In fact, *managing* governance networks may not even be feasible; *facilitating* governance networks seems to be a more appropriate application. Given the nature of multiplex ties in governance networks, it is important to identify and evaluate the roles that public managers play as leaders of, and members in, governance networks.

Network administration takes place when the operations of the whole network, or at least those subsystems of the network that are visible or known, are considered. “Network management . . . involves steering efforts aimed at promoting these cooperative strategies within policy games in networks. Thus, network administration may [be] seen as *promoting the mutual adjustment of the behavior of actors with diverse objectives and ambitions with regard to tackling problems within a given framework of interorganizational relationships*” (Kickert and Koppenjan, 1997, p. 44). A network administration paradigm will blend a range of administrative roles and functions, leveraging the mechanisms of authority found in command and control environments with administration through formal and informal agreements. Network administration must also account for the administration of horizontal ties built on the establishment of trust, reciprocity, and durability. Bressers and O’Toole suggest that network administration “involves such important but potentially multilateral tasks as facilitating exchange, identifying potential options for multiactor agreement, and helping to craft patterns of communication as well as multilevel and multiactor governance arrangements” (2005, p. 141).

Several strategies that network managers have been described as undertaking within governance networks are being singled out in this chapter. Although the list of potential strategies at the disposal of network managers is long, we have settled on a few critical strategies and skill sets that appear to be most pertinent. As interest in network governance has proliferated, a series of best practices or axioms have been put forth by some of the leading researchers and theorists in the field. When possible, suggested best practices will be highlighted here to give the reader a sense of the range of practice guides that are suggested. The list of network management practices discussed here is not exhaustive. For deeper investigation into management of networks, we recommend Kline and Koppenjan’s 2015 book titled *Governance Networks in the Public Sector*.

Research undertaken by Stephen Goldsmith and William D. Eggers (2004) provided a strong basis for understanding the skills of public managers for initiating and developing mixed-actor governance networks. They assert that working within a collaborative and network model requires attitudes and behaviors beyond what is typically called for with a public manager accustomed to exercising hierarchical control. The central feature of network management is working in *shared power relationships*, an environment that requires flexibility and adaptability. Sharing power to achieve collective outcomes calls upon competencies to move networks toward performance outcomes, while still managing for high levels of performance against an agreed upon set of goals and objectives (Goldsmith and Eggers, 2004).

The qualities of network managers are also reflected in the work of Robert Agranoff (2007), who examined managerial lessons evident in networks that have been established by network managers. These lessons are distinguishable

from those represented in hierarchical structures. Among the ten lessons identified among network managers (see Table 8.2)—take a share of the administrative burden, operate by agenda orchestration, accommodate and adjust while maintaining purpose—network managers will need to rely upon interpersonal skills (lesson 8) that reflect working in a shared power arrangement.

As the result of studying fourteen collaborative networks represented in further research, Robert Agranoff provides additional observations regarding managing in networks. These observations include the recognition that managers still tend to do the bulk of their work within hierarchies. He recognizes that “most collaborative decisions or agreements are the products of a particular type of mutual learning and adjustment.” These mutual learning adjustments lead to the proliferation of public sector knowledge management activities. He also observes that “despite the cooperative spirit and aura of accommodation in collaborative efforts, networks are not without conflicts and power issues” (Agranoff, 2006, p. 57). With these findings, it is evident that network managers need to operate in very different ways and in many different settings. Some of the skills will be less evident, or what Kettl refers to as “indirect” skills (Kettl, 2002).

Not surprisingly, governance networks have been found to experience points of conflict. Conflicts are a critical, and some deem necessary, element of

Table 8.2 Ten Lessons on How to Manage in Networks

1.	Be representative of your agency and the network.
2.	Take a share of the administrative burden.
3.	Operate by agenda orchestration.
4.	Recognize shared expertise-based authority.
5.	Stay within the decision bounds of your network.
6.	Accommodate and adjust while maintaining purpose.
7.	Be as creative as possible.
8.	Be patient and use interpersonal skills.
9.	Recruit constantly.
10.	Emphasize incentives.

Compiled from: Agranoff (2007).

governance networks. Conflicts may come about as the result of real, substantive differences of opinion and perspective. Rosemary O’Leary and Lisa Blomgran Amsler (formerly Bingham) studied the nature of conflict and conflict resolution in network settings. They concluded their study with the following observation about the complex nature of conflict in networks (O’Leary and Bingham, 2007, pp. 10–11):

- Members bring both different and common missions.
- Network organizations have different cultures.
- Network organizations have different methods of operation.
- Members have different stakeholder groups and different funders.
- Members have different degrees of power.
- There are often multiple issues.
- There are multiple forums for decision making.
- Networks are both interorganizational and interpersonal.
- There are a variety of governance structures available to networks.
- Networks may encounter conflict with the public.

These forms of network conflict will resonate, quite loudly, as we consider governance network accountability and performance management systems in Chapters 9 and 10. The notion that “adding actors does more than complexity, it tilts the balance of power” (O’Toole and Meier, 2004b) suggests that conflict in network contexts is all but inevitable. This makes advancing our capacities to describe and analyze the efficacy of accountability and performance standards all the more crucial.

The range of observations regarding what accounts for effective network management may be distilled into a smaller number of network management strategies. We believe that these strategies appear across the literature referenced here. These strategies also, coincidentally, align with the public administration paradigms discussed earlier in this chapter.

Selected Governance Network Administration (GNA) Strategies

As a person responsible for a portion, or in some cases all, of a governance network’s functions, a network manager will likely want to draw upon a range of strategies that “can be used both to influence goal-oriented processes (governance) and to create the conditions which facilitate the mutual formulation of targets (network management)” (Kickert, Klijn and Koppenjan, 1997, pp. 170–171). These strategies are employed through the enactment of certain policy tools and the execution of certain network management skills. A variety of governance

strategies have been recognized as being crucial to interorganizational networks, including leading and following (Koontz et al., 2004); boundary spanning (Kettl, 2006); and orchestrating, modulating, and activating (Salamon, 2002b). In addition to these roles, network managers can employ various governance strategies, including mandating, endorsing, facilitating, and partnering (Fox, Ward, and Howard, 2002).

Taking stock in the current state of collaborative management, Rosemary O’Leary and Nidhi Vij (2012) divide network management traits into three categories: personal, interpersonal, and group process. Personal traits include open minded, patient, change oriented, flexible, unselfish, persistent, diplomatic, honest, trustworthy, respectful, empathetic, goal oriented, decisive, friendly, and a sense of humor. Interpersonal traits include good communication, listening, and ability to work with others, while group process traits include a facilitator demeanor, interest-based negotiation skills, collaborative problem solving, understanding group dynamics, culture, compromise, conflict resolution, and mediation skills (2012, p. 515).

Chris Silvia and Michael McGuire (2010) studied the issue of leadership in networks by surveying over 400 public sector leaders involved in emergency management networks. Drawing on a framework for identifying leadership skills and traits put forth by Montgomery Van Wart (2005), they assessed the respondents’ levels of use of three types of leadership behaviors: people-oriented, task-oriented, and organization-oriented. People-oriented behaviors were the most frequently reported behaviors cited by the emergency managers. Some of the most frequently reported people-oriented skills included: using incentives to motivate (other network actors), settling conflicts, and permitting staff and network to set the pace. Task-oriented behaviors that were more frequently reported included deciding how tasks are performed, selecting performance measures, assigning tasks, and establishing agreement on the nature of tasks. Frequently reported organization-oriented behaviors included the ability to see and change structures and influencing values and norms. Perhaps the most significant finding from their landmark study is that when the respondents were asked to report on the frequency of behaviors for work within their own agencies and across the networks that they manage, the data varied only by a little. *In other words, Silvia and McGuire concluded that the skills and behaviors needed to effectively manage and lead organizations are very similar to those needed to manage and lead governance networks.*

Given the range of assertions found across the literature relative to managing and leading networks, a distilled list of network management skills and activities is provided. Table 8.3 summarizes these strategies and their relationship to the major administrative paradigms of public administration. These skills and activities are, following Silvia and McGuire, equally important in managing and leading within single organizations. In the section that follows, the characteristics

of each strategy are described along with the corresponding role of the public administrator.

Oversight and Mandating

Effective network managers know when and how to endorse, enhance, or confer oversight and mandate practices as needed. Oversight is a standard managerial function found in any hierarchical or principal-agent relationship. Administrative oversight may be premised on the designation of a lead organization or an individual leader of a governance network. When the authority is based on the position of the leader or overseer, the capacities of the leader to lead, and followers to follow become critically important. Administrative oversight may be derived through the issuance of executive orders, spelled out in contract agreement language, or agreed upon through a memorandum of understanding.

Mandating provides “minimum standards for . . . performance within the legal framework” (Fox, Ward, and Howard, 2002, p. 3). Very often the role of government in a mandating relationship is that of a traditional command and control orientation that is defined through legislation and implemented through agency regulation (Fox, Ward, and Howard, 2002, p. 3). Tools associated with mandating roles include social and economic regulation, and fines and sanctions. For the public administrator, implementing mandates may be seen either in terms of the traditional command and control perspective or from an emergent perspective on mandates that explicitly provides regulated agents with more negotiating and bargaining power. The latter perspective, known as process-oriented or meta-regulation, suggests that government sets a framework within which regulated agents like corporations and industry must operate, but then corporations are given latitude in defining the ways that they may come into compliance (Parker, 2007; Gilad, 2010). Examples of such regulatory regimes include voluntary disclosure programs, where firms are offered the opportunity to monitor violations and report them on their own, in exchange for reduced sanctions and potential collaboration with the regulator to fix problems (Mills, 2011; Mills and Reiss, 2014). From the regulators’ point of view, they increase the available information (at relatively low cost) and thus help improve oversight (Mills, 2010; Mills and Reiss, 2014). They also improve compliance by encouraging cooperation both at the disclosure stage and at the “fix” stage. At the same time, scholars have criticized such programs as allowing free riding (Delmas and Keller, 2005) and as ineffective without command and control mechanisms to supplement them (May, 2005; Toffel and Short, 2008) or even ineffective, period (Vidovic and Khanna, 2007; Darnall and Sides, 2008). Thus, mandates do not necessarily imply coercion. Mandating sets parameters, but regulated interests may have room for “adjustment seeking” (Agranoff and McGuire, 2003, p. 75). The ability of public managers to grant “regulatory relief” is a critical component of managing

Table 8.3 Network Administration Coordinating Strategies

<i>Governance Network Administration Coordinating Strategy</i>	<i>Strategy Characteristics</i>	<i>PA Paradigm</i>			
		<i>Classical PA</i>	<i>NPM</i>	<i>CPM</i>	<i>GNA</i>
Oversight; mandating	Use of command and control authorities to gain compliance; employed in most classical hierarchical arrangements and regulatory subsystems	X			X
Providing resources	Provision of one or more forms of capital resources as inputs into the network	X	X	X	X
Negotiation and bargaining	Engaging in processes of mutual adjustment and agreements ultimately leading to common acceptance of parameters for resource exchange and pooling and other forms of coordinated action		X	X	X
Facilitating	Use of coordinating strategies to bring actors together and ensure the flow of information and joint actions between actors; usually relies on incentives and inherent agreements on common norms and standards		X	X	X
Engaging citizens	Use of administrative authority to ensure the participation of selected interests or citizens at large; relies on models of deliberative and consensus-seeking processes			X	X

Table 8.3 Network Administration Coordinating Strategies (continued)

<i>Governance Network Administration Coordinating Strategy</i>	<i>Strategy Characteristics</i>	<i>PA Paradigm</i>			
		<i>Classical PA</i>	<i>NPM</i>	<i>CPM</i>	<i>GNA</i>
Brokering; boundary spanning	The development and use of social capital to bridge boundaries, establish new ties				X
Systems thinking	The development of situational awareness of the complex systems dynamics that are unfolding within governance networks				X

across sectors (Agranoff and McGuire, 2003, p. 75). Regulatory relief can be viewed as what Ayres and Braithwaite (1992) call “responsive regulation.”

Providing Resources

Effective network managers consciously manage the flow of resources into and out of a network, and know when and how to mandate that certain actions be undertaken. In Chapters 3 and 4 we discussed how the range of capital resources that a given actor brings to the network shapes public managers’ functions and roles within the network-wide structure. In order to account for an actor’s role as a provider of resources to a network, the ability to provide a resource is a distinct and powerful network management strategy. From a systems perspective, the provision of such resources serves as a critical input and process factor. Such provisions may either require or lead to the establishment of a lead organization, as in the case when a funder enters into an agreement with those that it funds. The selection of which capital resources to provide, when to provide them, and on what conditions they are provided falls into the realm of network management strategies adopted by network managers.

We suggest that the selection of certain forms of capital resources predicates the kind of specific strategies employed. Those public managers responsible for managing the flow of financial resources into or out of a governance network will employ budgeting and accounting practices. Network managers may be stewards of physical or natural resources that are used by the governance

network—bearing responsibility for the management of buildings, office equipment, and other built infrastructure or certain forms of ecosystem services at the disposal of the network. Network managers will likely provide human capital to the network, bringing with them certain skills sets and knowledge that are used by the network at large. Network managers may bring their social capital to the network, providing boundary spanning and bridging functions. As Agranoff has noted (2006), network managers may take a role in managing the flow of knowledge and facilitate learning. They may also bring political capital into the network, exerting influence or lending their legitimacy to network operations.

Lester Salamon refers to the provision strategy of network management in terms of the “modulation” of rewards (2002b, p. 17). Providing resources such as subsidies or other kinds of policy incentives may be used to get private parties to make investments in network-wide activities. The provision of resources in terms of modulating network activity is a critical facet of network management practices.

Negotiating and Bargaining

Effective network managers need to know when and how to guide negotiation and bargaining, either at the whole network or across a particular subnetwork. According to Michael Watkins, one of the leading scholars of negotiation and bargaining, “people negotiate to advance their interests and those of the institutions they represent” (Watkins, 1999, p. 245). Echoing Agranoff and McGuire, we can ask, “Is bargaining a useful tool for advancing *mutual* interests?” (Agranoff and McGuire, 2004, p. 502). They answer that yes, indeed, the use of negotiation and bargaining strategies, in the very least, allows for individual actors to represent their own interests in processes premised on mutual adjustments between two or more parties. Negotiation and bargaining skills appear to be a critical strategy employed by network managers because the processes that aid “mutual adjustment” provide a space for alignment around common goals and expectations, as well as agreements around the parameters for resource exchanges and pooling.

Although negotiation and bargaining has been recognized as a critical skill set in contract management (Cooper, 2003), the integration of negotiation and bargaining strategies and processes into the public administration mainstream has been slow in developing. This is not to suggest that negotiation and bargaining skills and strategies have lacked attention in the wider literature. Texts on negotiation have proliferated within the business and international diplomacy fields, with Fisher, Ury, and Patton’s *Getting to Yes* (1991) being the most popular text of this genre. Much of the literature on negotiation has presented negotiation processes in a linear or staged fashion, with negotiators “sitting at the table” to hammer out an agreement.

Watkins (1999, p. 255) has suggested that negotiations take on nonlinear dynamics marked by:

- Sensitivity to early interactions: the beginning of negotiations sets the tone for future interactions.
- Irreversibility: sometimes negotiators “walk through doors that lock behind them.”
- Threshold effects: small incremental moves resulting in large changes in the situation.
- Feedback loops: established patterns of interactions among actors readily become self-reinforcing.

Watkins’s view of negotiation suggests that negotiation skills and strategies should be viewed more as a generative process. He outlines ten propositions that skilled negotiators should consider. We provide a summary of these propositions in Table 8.4.

Watkins studies negotiation as a generative, phenomenological process. Yet, his view of negotiation processes still advances negotiation as a formalized process involving two parties. Network managers may negotiate in less formal settings. Negotiation and bargaining can unfold without conscious recognition that a negotiation is taking place. With this in mind, it is suggested that effective network managers recognize when negotiation is needed and being undertaken, and attempt to exert their influence over the processes as needed. Thus, whether negotiation follows a formal or informal line, the ten propositions laid out by Watkins are important.

Facilitating

Effective network managers are facilitative and know when, where, and how to negotiate to achieve greater outcomes for the whole network. As a facilitator, a network manager can “bring parties together” and create an “enabling environment” (Lepoutre, Dentchev, and Heene, 2007, p. 400) in which common goals or standards, or common agreements around resource exchanges and pooling, can be reached. In this role, the public administrator can activate network partners in an effort to reach a policy goal or outcome. Lester Salamon recognizes network activation as a critical strategy undertaken by network managers (2002b). The activator is responsible for bringing together all available resources, such as money, expertise, and information, into one integrated network (Agranoff and McGuire, 2003). Salamon also identifies orchestration as an important network management skill set, equating the concept with the conscious facilitation of network activities as a matter of sustaining its collective action.

Table 8.4 Ten Propositions for Negotiation

	<i>Proposition</i>	<i>Negotiation Skill</i>
1.	Negotiations rarely have to be win-lose, but neither are they likely to be win-win.	Skilled negotiators tailor their tactics to the type of negotiation, seeking both to create value and to claim value by crafting creative deals that bridge differences.
2.	Uncertainty and ambiguity are facts of life in negotiation.	Skilled negotiators seek to learn and shape perceptions through orchestrated activities taken at and away from the negotiating table.
3.	Most negotiations involve existing or potential sources of conflict that could poison efforts to reach mutually beneficial agreements.	Skilled negotiators often are called upon to mediate even as they negotiate, and intervention by outside parties is commonplace.
4.	Interactions among negotiators are fundamentally chaotic, but there is order in the chaos.	Skilled negotiators find opportunity in the fog of negotiation.
5.	While negotiations occurring in diverse contexts may appear to be very different, they often have similar underlying structures.	Structure shapes strategy, but skilled negotiators work to shape the structure.
6.	Most negotiations are linked to other negotiations, past, present, and future.	Skilled negotiators advance their interests by forging and neutralizing linkages.
7.	Negotiations are fragmented in time, and movement occurs in surges.	Skilled negotiators channel the flow of the process and work to build momentum in promising directions.
8.	Most important negotiations take place between representatives of groups.	Just as leaders often are called upon to negotiate, so too are negotiators called upon to lead.
9.	Organizations often are represented by many negotiators, each of whom conducts many negotiations over time.	Success in setting up organizational learning processes contributes to increased effectiveness, both individual and collective.
10.	Negotiation skills can be learned and taught.	Expert negotiators possess skills in pattern recognition, mental simulation, process management, and reflection in action, and these skills can be developed through carefully structured experience.

Compiled from: Watkins (1999). *Negotiation Journal*, 15, 248.

Camilla Stivers, among others, has promoted the notion of facilitative leadership within public administration. According to her, facilitative managers

emphasize the possibility of leadership as facilitation rather than the giving of orders, and authority as accountable expertise rather than as chain of command. Ultimately, working within such a perspective, we should be able to ground administrative legitimacy in accountability that not only is exercised in the privacy of the individual conscience or in the internal process of a particular agency, but also tangibly enacted in substantive collaboration with affected others, including members of the general public.

(2004, p. 486)

We may consider that facilitation is not synonymous with traditional forms of leadership. “Although many leaders can (and should) be effective facilitators, the facilitator differs from a leader in that the former is cognizant about the use of power, authority, or control and places limitations on uses of it” (Reed and Koliba, 1995, p. 4). The execution of effective facilitation skills is central for the development of mutual accountability structures within collaborative settings. We offer a few keys to facilitating group dynamics in Table 8.5.

To be successful, public managers will need to rely upon what Kickert and Koppenjan (1997) refer to as *reticulist skills*, or assessment skills to correctly determine involvement, interaction processes, and the distribution of information. Schaap describes facilitation strategies as providing the “means for creating procedures for ongoing interaction, discussions, negotiations, and decision-making.” The effective facilitator helps “actors . . . bind themselves to those procedures” (2008, pp. 126–127). Facilitation is central to the ongoing success of a governance network strategy.

Engaging Citizens

Effective network managers understand when and where to build and embed efforts to intentionally engage citizens, interest groups, and other related stakeholders by using participatory and deliberative governance practices. Participatory governance is defined as “the devolution of decision-making authority to state-sanctioned policy-making venues jointly controlled by citizens and government officials” (Wampler, 2012, p. 668). According to Wampler and others, participatory governance structures are “grafted” into existing state institutions, and may be viewed as a critical feature of governance network administration.

Participatory governance includes a number of strategies within quasi-legislative and quasi-judicial administrative tools employed by public administrators to leverage greater citizen control and involvement. Bingham, Nabatchi,

Table 8.5 Keys to Facilitation Strategies in Network Management

Create a safe space	In order for group members to express their thoughts and opinions, they must feel that they can do so without fear of attack or condemnation. It is the facilitator's job to create such an environment, to monitor participant's comfort levels, and to take the necessary steps to maintain safety. This includes understanding and planning for individual differences in needs, abilities, fears, and apprehensions. Participants who feel safe are more likely to make honest and genuine contributions and to feel camaraderie and respect toward other group members.
Set ground rules	Ground rules establish a foundation upon which the group's communication will occur. They help to create a safe environment in which participants can communicate openly, without fear of being criticized by others. Ground rules that have been arrived at by all members are the most useful and can be repeated if tension rises.
Promote active listening	Staying quiet and considering others' remarks can be challenging when controversial topics are discussed, but is crucial to respectful communication. Facilitators should discourage participants from professing their opinions without considering and responding to others' comments. Instead, facilitators should model communication in the form of a dialogue, in which participants listen and respond to each other. The type of communication used (whether polite conversation is favored over informal or slang conversation) can vary, and should be determined according to such factors as the group's cultural background, familiarity with each other, goals for reflection, etc.
Manage disagreements	It has been said that whatever resists will persist. Facilitators must be adept at recognizing tension building in the group, and respond to it immediately. Among the most useful strategies is to repeat the ground rules established by the group, including a reminder that criticism should pertain to ideas, not people. In addition, facilitators should not permit any disrespect or insults and should clarify misinformation. It is important that negative behavior be handled immediately so that participants do not get the impression that the behavior is condoned by the facilitator.
Promote equality	Equality of participants should be communicated and modeled by the facilitator. Again, the facilitator must be an alert observer, identifying signs of a developing hierarchy, or of divisive factions within the group. He or she should not permit arguing against any group member(s), and should not take sides in any developing debate. Such situations can be counteracted by recognizing all members, and encouraging their participation equally.

**Table 8.5 Keys to Facilitation Strategies in Network Management
(continued)**

Be mindful of power and who has it	All groups have opinion leaders or people who most others look up to. Often, these opinion leaders will set the tone for a discussion, thereby limiting active involvement of the more reserved members. Identify who these opinion leaders are, and if it appears as though their power and authority are dominating the discussion, ask them, politely, to entertain other opinions.
Build in diversity	Facilitators must begin by recognizing their own attitudes, stereotypes, and expectations and must open their minds to understanding the limits these prejudices place on their perspective. The facilitator will be the role model that the group looks to, and should therefore model the values of multiculturalism. It is important that diversity be integrated throughout the reflection programming, rather than compartmentalized into special multicultural segments.

Source: Reed and Koliba. (1995). Facilitating reflection: A guide for leaders and educators. Retrieved November 30, 2009 from http://www.uvm.edu/~dewey/reflection_manual/index.html

and O’Leary (2005, pp. 547, 552) identify the legal framework from which the public administrator can utilize participatory governance:

Quasi-legislative processes include deliberative democracy, e-democracy, public conversations, participatory budgeting, citizen juries, study circles, collaborative policy making, and other forms of deliberation and dialogue among groups of stakeholders or citizens.

Quasi-judicial processes include alternative dispute resolution such as mediation, facilitation, early neutral assessment, and arbitration [and include] . . . mini-trials, summary jury trials, fact finding . . .

Quasi-legislative and quasi-judicial processes are avenues for network managers to leverage citizen participation in collaborative policy making. Lisa Bingham, Tina Nabatchi, and Rosemary O’Leary outline a wide range of examples at the international, federal, state, and local levels that exemplify citizen inclusion strategies of public service governance. The authors conclude their work with a call for extended research with regard to process choices, quality, representation, policy cycle connection, impact, implementation, and institutionalization (pp. 554–555).

As an added dimension to the legal framework of participating governance possibilities, Archon Fung (2006) has developed a framework to interpret various participatory strategies and their influence with respect to the democratic outcomes of legitimacy, justice, and effectiveness of public action. The framework provides participatory designs based upon ranges of three governance dimensions: participant selection, communication and decision, and authority and power. In this effort, each design is examined in light of the ability to achieve democratic outcomes. Fung argues that “no single participatory design is suited to serving all three values simultaneously; particular designs are suited to specific objectives,” and “direct participation should figure prominently in contemporary democratic governance” (2006, p. 74.)

Additional research has been accumulated to assist public managers with specific participatory governance strategies by focusing on public deliberation (Lukensmeyer and Torres, 2006). This research seeks to overcome the institutional barriers of implementing public deliberation strategies (policy fragmentation about citizen engagement and poor knowledge sharing about civic engagement) in order to offer managerial guidance and examples of various kinds of face-to-face and online deliberative democracy examples. Lukensmeyer and Torres (2006) provide a managerial guide to participatory governance alternatives that cover tools of participation (informational, consultation, engagement, and collaboration) as well as a framework for selecting engagement techniques that is reflective of a range of engagement parameters. In their review of eight models of deliberative democracy, the authors offer numerous examples of model applications.

Citizen-administration consensus-oriented deliberation (Yankelovich, 1991) continues to receive a great deal of attention that suggests a basis for optimism in neighborhood councils (Berry, Portney, and Thomson, 1993), urban neighborhoods (Fung, 2004), and a number of other sectors, such as participatory budgeting (Weeks, 2004) and environment and land use planning (Lukensmeyer and Torres, 2006).

While there is a great deal of optimism with regard to the promise and exercise of the various kinds of participatory governance, there remain a number of issues that concern how participatory governance is designed and implemented. One concern centers upon the political nature of governance where participatory governance cannot overcome the trade-offs between democratic values and norms, and pragmatic realities fueled by the desire for greater efficiencies or tacit power struggles (Roberto, 2004).

Another concern is related to the way in which participatory governance is designed and perhaps misapplied by government. Erik-Hans Klijn and Chris Skelcher note how some of this literature “starts from the theoretical premise that networks are predominantly characterized by horizontal relationships, self-steering and pluralism, and that too easily draws an association with deliberative

forms of democracy, when, in essence, their dynamics are inherently more complex" (2007, p. 605). Citizen governance strategies that are mandated by law, such as public hearings and citizen advisory boards, may influence governance practices very differently than strategies that are based on citizen-centered or bottom-up initiatives.

Rodriguez et al. (2007) studied the dynamics within governance networks devised to coordinate the delivery of health care within Canada. Quasi-governmental boards worked with networks of large, regional hospitals and local health clinics, all of which were forced through legislative mandate to collaborate in efforts to coordinate health care delivery within their regions. They found that in this setting, at least, top-down oversight from the quasi-governmental board was needed in order to advance and deepen coordinated activities. In those instances in which actors were left to reach consensus around objectives of their own volition, tangible results were hard to come by (Rodriguez et al., 2007).

A related concern is the use of participatory governance strategies for bureaucratic rather than network-wide interests. A factor hampering the proliferation of deliberative forums concerns the coupling of deliberative processes to tangible decision making within the governance network itself. The results of citizen deliberations may be effectively communicated to actors within the governance network, only to have this feedback summarily ignored or reframed to meet the desired ends of the real power brokers within the network. In essence, deliberative forums may do more to co-opt citizens than provide them with real power within networks.

Clearly, the infusion of deliberative processes into the functioning of governance networks is by no means a simple feat. Consensus-oriented decision making is not easy (Priem and Price, 1991; Klijn, 2001; Roberto, 2004), nor, many argue, is it appropriate in all cases. Efforts to promote issue forums, study circles, etc., are hampered by challenges associated with reaching consensus when diverse interests and perspectives are introduced into these forums. While deliberative processes are gaining attention, there are serious barriers to greater citizen participation in such forums. Finally, the challenge of implementing these kinds of participatory processes calls upon a different set of skills of the public administrator. As Bingham, Nabatchi, and O'Leary (2005) assert, "Both quasi-legislative and quasi-judicial new governance processes require analogous skills from public administrators, including convening, conflict assessment, negotiation, active listening and reframing, facilitation, and consensus building" (p. 548).

The role of the governance network managers needs to be framed within both quasi-legislative and quasi-judicial processes and will entail a wide range of participatory and deliberative options. Based upon evidence from a number of research efforts, it is clear that the skills of the administrator will focus on the ability to facilitate multiple stakeholder interests in complex settings and require

the balancing of both network and hierarchical demands. Those areas in need of balance will be the basis for creating legitimacy. The key feature of this legitimacy will rest in the social construction of the service design and implementation that finds a balance among public service design alternatives and participatory processes. Those writing about collaborative and participatory governance often view the public manager as playing a central role in achieving this balance.

Boundary Spanning and Brokering

Effective network managers build and leverage social capital through a variety of boundary spanning and brokering activities. In Chapters 3 and 4 we laid out a range of actor and tie characteristics and noted how the network metaphor—grounded in the tinker toy metaphor of nodes and links/actors and ties—lies at the heart of this descriptive architecture. More than simply a metaphor, the management of network actors and the kinds of ties forged between them requires creating the capacity to span social, cognitive, and epistemic borders and boundaries. Network managers can serve as boundary spanners who, according to Robert Agranoff and Michael McGuire, may transcend boundaries that are both vertically and horizontally arranged (2003, p. 16).

In laying out a theory of communities of practice, Étienne Wenger discusses the role that boundary spanners and brokers play in managing networks. “Brokers are able to make new connections across [organizations] and communities of practice and enable coordination.” He goes on to add that “if they are good brokers [their efforts lead to] opening new possibilities for meaning” (Wenger, 1998, p. 109). Wenger describes brokering activity as an interplay of translation, coordination, and alignment.

“Brokering provides a participative connection . . . because what brokers press into service to connect practices is [the broker’s] experience of multimembership and the possibilities for negotiation inherent in participation [within and across these groups]” (Wenger, 1998, p. 109). Wenger describes brokering as a process of translating knowledge and information, opinions, and perspectives into reference frames that are comprehensible to other network actors. Brokering also requires some measure of coordination, aspects of which may be found in our previous discussion of facilitation and participatory governance. As a result of generative translations and efforts at coordination, the broker may assist in achieving some alignment between network actors. Brokers need enough legitimacy to influence the development of a practice, mobilize attention, and address conflicting interests. Brokering also requires the ability to link practices by facilitating transactions between them, and to cause learning by introducing into practice elements of another. Brokering strategy inevitably calls for the mobilization of a network management, human, social, and political capital.

Ronald Burt's "structural hole" theory of social networks underscores the importance that boundary spanning and brokering can play within networked environs. Burt describes how most social networks possess structural holes within them (1997). Burt's studies of structural holes in organizational settings have led him to conclude that the existence of structural holes may actually provide a better environment for the diffusion of innovation. Following Granovetter's "strength of weak ties" hypothesis, Burt asserts that "networks rich in structural holes present opportunities for entrepreneurial behavior" (Burt, 1997, p. 342). Network managers who serve as brokers can play a role in fostering greater innovation. This premise serves as the foundation of a network's capacity to stimulate innovation (Sorensen and Torfing, 2011).

The manager who is capable of "filling in" a structural hole through linking two nodes that had not been previously linked "has a say in whose interests are served by the bridge" (Burt, 1997, p. 342). Brokering and boundary spanning may position a network manager to be highly influential. As Burt notes, "When coordination is based on negotiated informal control, as in network organization, more successful managers will be the managers with better access to the information and control benefits of structural holes" (Burt, 1997, p. 360).

Filling in structural holes across organizations possesses its own hazards to the broker. Wenger warns that "brokers must often avoid two opposite tendencies: being pulled in to become full members and being reflected as intruders. Indeed, their contributions lie precisely in being neither in nor out" (1998, p. 110). Thus, network managers may face somewhat of an identity crisis as they seek to span boundaries and possibly serve two masters.

Systems Thinking and Situational Awareness

A critical skill set and strategy that governance network managers should employ is centered on the concept of systems thinking. Popularized by Peter Checkland (1981), Peter Senge (1990), and others who integrated systems theory into organizational development and managerial leadership, systems thinking encompasses a capacity to see and act upon an appreciation of the "interrelatedness within and among systems." Systems thinkers hold on to this capacity to see the interrelatedness between the parts of the system and the whole by maintaining a time span of interest long enough to see patterns of interaction and behavior to appear (van den Belt, 2004, p. 22).

Mica Endsley observes that administrators with situational awareness seek to classify and understand the situation around them. They rely on "pattern-matching mechanisms to draw on long-term memory structures that allowed them to quickly understand a given situation." Situational awareness "is the perception of the elements in the environment within a volume of time and space, the comprehension of their meaning, [and] the projection of their status

in the near future.” Situational awareness should explain dynamic goal selection, attention to appropriate critical cues, expectancies regarding future states of the situation, and the tie between situation awareness and typical actions (Endsley, 1995, p. 34).

The situational awareness that is derived through systems thinking then needs to be applied through the execution of administrative discretion and operationalization of goals. Network managers may seek to identify and act upon the “leverage points” providing opportunities to intervene in the system. Donella Meadows’s listing of the twelve leverage points is provided in Figure 8.1.

Meadows (2008) views the leverage points within a system as points where power may be executed. Systems thinking, when applied to the coordination of governance networks, leads to the identification of bifurcation points within the system that, when pushed, pulled, or enacted, lead to changes in the system’s dynamics. In Chapter 7 we characterized network administrative practice as a form of feedback rendered on or within a system. To this end, the execution of systems thinking within the context of governance network administration involves the conscious manipulation, facilitation, and coordination of the variety of forms of feedback that guide the system’s dynamics.

1. Harness the power to transcend paradigms
2. Change or maintain the mindset or paradigm out of which the system arises
3. Modify the goals of the system
4. Add to, change, evolve, or support the self-organization of the system structure
5. Change the (explicit and/or implicit) rules of the system
6. Structure of the flow of information across the system
7. Try to drive the intensity of positive feedback loops impacting the system
8. The strength of the negative feedback loops impacting the system
9. Monitor and modify the length of delays, relative to the rate of systems changes
10. Structure of the material flow of capitals through the system
11. Alter the available stocks of resource capitals available to the system
12. Alter the constants, parameters, numbers used to determine performance standards

Figure 8.1 Places to Intervene in the System.

(Compiled from: Meadows (2008). *Thinking in systems*. White River Junction, VT: Chelsea Green Publishing.)

Ralph Stacey distinguishes between systems thinking and “complex responsive processes,” criticizing some of the first-generation systems thinking as ignoring the emergent, adaptive characteristics of the system. Rather than pulling the levers and exploiting discernible leverage points to elicit responses, his view of what we might characterize as second-generation systems thinking focuses less on thinking in terms of what already exists and more on “thinking in terms of patterns that are continually reproduced and potentially transformed” (2001, p. 197). Stacey emphasizes the intersubjective creation of shared meaning that only emerges through the interactions of social actors. This position echoes the calls for more phenomenological interpretations of administrative action made by Ralph Hummel (2001). Stacey, Hummel, and others concerned about the reign of a positivist interpretation of network administration and performance underscore the need to view systems thinking as an important contributor to the social construction of social reality.

We argue that a systems thinking approach to network administration needs to be viewed within the context of organizational learning (Senge et al., 1994; Argyris and Schon, 1995). According to proponents of systems thinking as social learning, “the key . . . is not analytical method, but organizational process; and the central methodological concern is not with isolation of variables or the control of bureaucratic deviations from centrally defined blueprints, but with effectively engaging the necessary participation of system members in contributing to the collective knowledge of the system.” Suggesting that social learning be integrated into administrative practices, David Korten goes on to observe that “the more complex the problem and the greater the number of value perspectives brought to bear, the greater the need for localized solutions and for value innovations, both of which call for broadly based participation in decision processes” (2001, p. 485). Thus, we conclude that systems thinking, and the kind of situational awareness arising from it, becomes an essential feature of all governance network administration. In other words, for any of the skills and strategies outlined in this chapter to succeed, the administrator employing them must possess a view of the whole and envision ways that his or her actions can support the network’s capacity to learn.

Decision Architectures, Communities of Practice, and Administrative Discretion

Effective network management hinges on the capacity of individuals and groups, communities of practice, and action arenas to make decisions that benefit network level goals. Basic questions drive our inquiry into these processes: Who makes decisions? How are they made? Who decides who will make the decisions? These relatively simple questions are addressed by most decision-making theories.

Answering them can provide a sense of the “decision architecture” (Price Waterhouse Change Integration Team, 1996; Cox, 2000) or “choice architecture” (Thaler and Sunstein, 2008) for a group, organization, or even a network. As we have noted throughout this book, decision making within networks occurs within arrays of actors and situations (Allison, 1971; Cohen, March, and Olsen, 1972; Pressman and Wildavsky, 1973; Koppenjan and Klijn, 2004). Joop Koppenjan and Erik-Hans Klijn (2004) describe decision making within networks as unfolding within a complex environment involving the individual, group, organizational, and interorganizational levels, with decisions occurring within and across these levels. Table 8.6 shows how they break decision making down in terms of social scale.

Herbert Simon recognized the complexity of decision making within single organizations, laying out the proposition that at best, decisions are made by individuals operating within a “bounded rationality” context (1957). Simon recognized that no decision maker has access to perfect information, knows all possible alternatives, has all the time needed to weigh all alternatives, or possesses the capacity to perfectly implement his or her decisions. Charles Lindblom noted how decision makers rely on past experience, limited information, and “satisficing” behaviors when making decisions (1959). In short, he suggested that decision making was vastly a product of environmental and phenomenological factors. These factors are inherently shaped by the human social dynamics within which most decisions get made.

Historically, such dynamics have been couched in terms of small group behavior. Most theories of group decision making are premised on the assumption that “group outcomes are a function of the match between (a) the demands placed on the group and the resources provided it, and (b) the communicative processes the group enacts to meet these demands and deploy its resources” (Poole and Hirokawa, 1996, p. 13). Such communicative functions include the processes used to make decisions, suggesting that decisions do not spring out of nowhere; they emerge through group dialogue that includes the sharing of opinions and perspectives and, in some cases, the evaluation of evidence (Frey, 1996).

Other developments in decision-making theory recognized the role that the timely synchronicity of events and actors plays within the decision-making process. Cohen, March, and Olsen, advanced the notion of the garbage can model of decision making (1972), viewing a decision within the context of a host of other decisions that require some combination of alignments between problems, solutions, and participants (Koppenjan and Klijn, 2004, p. 52). Graham Allison’s classic study of the Cuban Missile Crisis illustrated the bureaucratic model through which decisions get made through a complex interplay between different governmental agencies (1971). Jeffrey Pressman and Aaron Wildavsky’s study of the Economic Development Administration (1984) shed

light onto the role of decision making across organizations. Tracking the number of decision points occurring within an implementation chain, they noted just how difficult it was to achieve agreement around not only policy goals, but the manner in which the prescribed solutions should be enacted (1984). Jon Kingdon's "policy stream" model suggests that decisions get made when problems, policies, and politics streams are fully or particularly coupled (1984). All of these models acknowledge the role that politics and other social dynamics play in decision making.

The bounded rationality/incrementalist perspectives on decision making focus on the role of the individual as *the* decision maker. Policy implementation studies, the garbage can, bureau-political, and policy streams models all suggest that decision making be viewed within the context of social systems comprised of individuals, groups, *and* organizations. The challenges to analyzing decision making amidst such complexity have long been recognized (Poole and Hirokawa, 1996). In addition to the problem of isolating "the decision" from a host of other functions undertaken within the social system, decisions are, as Simon (1957) first articulated, embedded in a means-ends hierarchy, in which "it serves both a means for a larger choice and as the end of the more restricted choices" (Poole and Hirokawa, 1996, p. 10). In governance networks, decisions occur across chains of actors (Cohen, March, and Olsen, 1972; Pressman and Wildavsky, 1984) that are inherently nonlinear and mitigated across network ties (Koppenjan and Klijn, 2004). By examining how decision making occurs within communities of practice we are able to describe and analyze the dynamics of the component parts of the system. As the decision-making dynamics of each community of practice get identified, we may then develop a model for how the decision architecture of the organization, construed within this context as a system, exists.

Systems theories are particularly useful in describing and analyzing these intricacies, as they are grounded in assertions regarding the "mental models" (Senge et al., 1994) that exist within and across multiple layers of individuals, groups, organizations, and networks of organizations within ever-widening social systems. Systems theorists (Bertalanffy, 1950; Boulding, 1956) assume that organizations are not closed containers, with fixed boundaries, roles, responsibilities, functions, and behaviors that adhere to rational order. While the early proponents of rationalism saw the stability of such entities as an indicator of rational thought and action, general systems theorists view stability as a matter of equilibrium. Within the context of a community of practice framework, such equilibrium is best understood within the context of the interplay within and across communities of practice (CoPs).

The community of practice has emerged as a unit of analysis that situates the role of organizational learning, knowledge transfer, and participation among people as the central enterprise of collective action (Koliba and Gajda, 2009).

Table 8.6 Multi-Social-Scale Approaches to Decision Making

<i>Level</i>	<i>Nature of Decision Making</i>	<i>Central Insights</i>	<i>Useful Theories</i>
Individual	The individual (central) decision maker assesses alternatives on the basis of his or her own objectives and with as much information as possible	Limitation of information processing capacity: bounded rationality	Rationality, incrementalism, and mixed scanning (Simon, 1957; Lindblom, 1959; Etzioni, 1967)
Group	Decisions are made in groups, where the group process influences course and outcome	Group processes influence information provisions, value judgments, and interpretations	Social psychology of groups (Janis, 1982); community of practice theory (Wenger, 1998)
Organization	Organizations make decisions in relative autonomy; the structure and function of the organization matter	Organizational filters, intraorganizational contradictions, and attention structures influence information processes and the decisions based upon them	Organizational process model; bureau-political model (Allison, 1971); garbage can model (Cohen, March, and Olsen, 1972); community of practice theory (Wenger, 1998)
Interorganizational	Decisions between mutually dependent organizations are taken in different configurations of vertical and horizontal settings in a highly disjointed nature	Subjective perceptions, power relations, dynamics, and coincidence influence information and decision making	Policy stream model (Kingdon, 1984); complexity theory (Koppenjan and Klijn, 2004); policy implementation (Pressman and Wildavsky, 1973)

Source: Adapted from Koppenjan and Klijn (2004). *Managing uncertainties in networks* (p. 44). London: Routledge.

Community of practice theory has been used most extensively within the knowledge management and learning organization fields. It has also been employed to explore the nature of professional practice within the context of collective learning (in the form of professional development (Parboosingh, 2002; Buyse, Sparkman, and Wesley, 2003)) and practice (in terms of evolving professional competencies (Nicolini, Gherardi, and Yanow, 2003; Adams and McCullough, 2003)).

Community of practice theory has come to be applied to both intra- and interorganizational settings (Koliba and Gajda, 2009). Within CoP theory, organizations and networks of organizations can be viewed as essentially constellations of communities of practice. Individual identity is said to be shaped by one's membership and "trajectories" within communities of practice in which he or she finds himself or herself (Wenger, 1998). CoP members may also serve as boundary spanners to other CoPs. Such roles are not mutually exclusive from being an insider, outbound, inbound, or on the periphery. CoPs that contain many peripheral members will likely be loosely coupled, while those with many insiders are more tightly coupled.

"Communities of practice are 'groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.' They operate as 'social learning systems' where practitioners connect to solve problems, share ideas, set standards, build tools, and develop relationships with peers and stakeholders" (Snyder, Wenger, and de Sousa Briggs, 2003, p. 17). Taking this definition of communities of practice and applying it to real-life settings, we find CoPs "existing everywhere" as "an integral part of our daily lives" (Wenger, 1998, pp. 6, 7). As such, the community of practice is a decidedly phenomenological entity, manifesting as a body of common experience between three or more people.

Although the concept of communities of practice has been applied extensively across multiple social science disciplines and professional fields, it has only recently been applied to the fields of public administration, public policy, and political science. CoP theory has been used to study innovative practices within police departments (de Laat and Broer, 2004) and army units (Kilner, 2002). Burk writes from his role as the senior knowledge officer for the Federal Highway Administration (FHWA) about his agency's utilization of CoP development to stimulate knowledge transfer (2000). Garcia and Dorohovich (2005) discuss their role in developing guidelines for the U.S. Department of Defense designed to foster the intentional cultivation of CoPs as a means to support information sharing and innovation. Dekker and Hansen (2004) discuss how CoP theory can be used to study the impact of politicization on public bureaucracies.

In discussing the potential role of CoPs in the analysis of cross-sector collaborations relating to the provision of public goods and services, Snyder, Wenger, and de Sousa Briggs (2003) assert:

The boundary-crossing organizational structures that we describe here serve not only to accomplish agency missions better. In the longer term, they provide also a foundation for a new kind of national governance model that emphasizes participation, inquiry and collaboration. . . . Communities of practice—addressing issues ranging from E-Government to public safety, and operating across organizations, sectors, and levels—can address national priorities in ways no current organizational structure can match.

(p. 22)

A review of the literature (Koliba and Gajda, 2009) finds several instances in which researchers applied CoP frameworks to the analysis of interorganizational and cross-sector collaborations with a focus on public policy, including within the health care arena (Lathlean and le May, 2002; Gabbay et al., 2003; Dewhurst and Cegarra Navarro, 2004), intergovernmental collaborations (Zanetich, 2003; Drake, Steckler, and Koch, 2004; Bouwen and Taillieu, 2004), transnational governmental organizations (Luque, 2001; Somekh and Pearson, 2002), inter-industry alignments (Starkey, Barnett, and Tempest, 2004), and networks of nongovernmental organizations (White, 2004; Rohde, 2004).

Implications of CoP theory for policy development, specifically health care policy (Gabbay et al., 2003; Popay et al., 2004), literacy education (Wixson and Yochum, 2004), standards-based school reforms (Gallucci, 2003; Hodkinson and Hodkinson, 2004), and environmental policies (VanWynsberghe, 2001; Attwater and Derry, 2005), have been made, pointing to the potential of CoP theory to help inform new and existing public policy initiatives. Citizen interface with public policies has been examined by Popay et al. (2004), who apply the concept of CoPs to explore issues of agency in professional practice. Youngblood's (2004) study of the role of CoPs in political parties points to the utility of CoP theory in the deconstruction of the often complex set of actors involved in policy development and execution.

These applications of CoP frameworks to the field of public administration and public policy have not, to date, focused on the individual and the ways in which an individual public administrator is immersed within, and impacted by his or her membership within, various communities of practice.

We are able to discern the types of decision processes and the roles that CoP members play when making decisions. For example, decision makers within the CoP can be distributed (in which consensus or voting is used) or concentrated (in which there is a particular decision maker). Decisions can be made by a single member of a group, a smaller subset of the group, or be based on the discretion of the entire group. Group members may play deliberative or consultative roles in decision making (Vella, 2002). Deliberative roles are substantive in nature. Deliberative decisions makers are those with the ultimate authority to make the

Table 8.7 Group Decision-Making Process

<i>Group Processes</i>	<i>Consultative Roles</i>	<i>Deliberative Roles</i>
Consensus	None	All deliberative
Voting	None	All deliberative, with majority opinion holding sway
Decisions made by a subset of the group	Those outside the subset may provide input into the decision	Subset of the group makes the decision
Single decision maker in the group	Group members may provide input into a decision to be made by the individual decider	Single member (or nonmember) possesses authority to make decision
Group provides input into an issue or decision	All consultative	Authority to make the decision falls to some other person or CoP

Table 8.7 illustrates the different kinds of configurations that may take place within a CoP.

decision. Consultative decision makers take on a secondary role, providing input or advice, but deferring to the deliberators to make the ultimate decision.

The role and function of decision making within groups often encompasses a complex set of arrangements. For example, some decisions may be left to the discretion of the group, with all members playing a deliberative role. This model can be viewed in terms of consensus or majority rule (e.g., voting). Other decisions can be the subject of discussion, with most members playing consultative roles and one or a small number of members making the final decision (playing the deliberative role).

The implications of this discussion of decision making as a function of governance network managers should be relatively clear. If the social level of the decision and the processes used to make the decision are clear, it is easier to undertake all of the skills and strategies mentioned in this chapter. In some cases, network managers can help to shift the scale of the decision or the process used to make a decision; in other cases, the network manager can bring clarity to the structure and process of decision making.

Decision Making Across Scales

Effective network managers understand when strategic, tactical, and operational decisions are needed to ensure effective network performance. Decision making also occurs across several levels of planning and tasks that include *strategic, tactical, and operational* levels (Ackoff, 1990) (see Figure 8.2). Systems theorist Robert Ackoff (1990) first distinguished between strategic and tactical planning and tasks. “Strategic decisions focus on prior (anticipatory) and posterior (after-the-fact) responses to such potential and actual changes in an organization’s environment as can affect its performance significantly” (Ackoff, 1990, p. 524). Strategic planning and tasks operate at the organizational level and with a longer view in mind. According to Ackoff, strategic planning is executed “from the top down.” Tactical planning is executed “from the bottom up.”

Derk Loorbach (2010) focuses on the application of strategic, tactical, and operational planning, tasks, and decision making to transition management. Noting how change unfolds within and across complex systems, he calls for prescriptive governance models that account for the heterogeneity of actors and includes top-down, market, network, and reflexive features (Loorbach, 2010, p. 166). His governance of transitions model spans the strategic, tactical, and operational levels, and adds an additional element: reflexivity. The reflexive dimension of collective action involves the capacity of the system, and its component parts, to learn.

Garry White (2009) applies the strategic-tactical-operational framework to information security systems. At the strategic level, the critical question of “what security problems exist?” is posed. The strategic level operates on the plain of policies, human motives and behaviors, threats, and risks. At the tactical level questions such as “how are security problems mitigated?” may be asked. The tactical level operates at the levels of planning for response and recovery, business continuity, best management practices, and standards, while at the operational

Operational level decision making. Undertaken at the level of making specific resource allocation recommendations, use of specific regulatory discretion, or specific approvals or disapprovals.

Tactical level decision making. Undertaken at the level of coordinating policies, procedures, and resource allocations.

Strategic level decision making. Undertaken at the level of making higher level decisions that lead to changes in resource allocation, regulatory discretion, and high level performance management targets.

Figure 8.2 Scales of Decision Making.

level questions such as “what security procedures and practices are to be utilized?” may be asked. The operational level operates at the level of maintenance of standards and goals set at the strategic and tactical levels.

Table 8.8 below provides a summary of the range of situational levels of planning, decision making, and tasks, including core questions, time horizons, central frames, organizational locations, and scale that may be used to support situational awareness across a governance network.

Ackoff’s early applications of systems theory to the differentiation of situational levels was pursued to develop a deeper understanding of how systems operate as a whole. In order to do so, one must consider how strategic, tactical, and operational decisions combine, commingle, or even compete with one another. Space precludes an in-depth exploration of challenges associated with the type of dilemmas that surface when strategic, tactical, and/or operational levels are considered in isolation of one another. However, these problems have long been noted in the management and leadership literatures as challenges of ensuring employee compliance with desired practices (Fayol, 1930; Gulick, 2004). Arguably, much of the leadership and management literature revolves around the challenges of garnering operational level employee buy-in, support, and compliance with strategic and tactical decisions and this dynamic extends into network management. In turn, much of the recent strategic planning literature focuses on building operational and tactical support within strategic planning processes (Bryson, 2011). This literature at least dates back to the total quality management (TQM) initiatives of the late 1980s and early 1990s, and finds resonance in the “lean management” and “results based accountability”

Table 8.8 Levels of Situational Awareness

<i>Scale of Decision Making</i>	<i>Core Questions</i>	<i>Temporal Dimension</i>	<i>Central Frame</i>	<i>Social Scale</i>
<i>Strategic</i>	Why and When?	Long	Functions/ Goals	Macro
<i>Tactical</i>	Where and How?	Intermediate	Structures	Meso
<i>Operational</i>	What?	Short	Practices	Micro
<i>Reflexive</i>	How Well?	All	Learning	Systemic

Compiled from: Ackoff (1990); White (2009); Loorbach (2010); Mattes (2015).

movements of the present era. Considered in light of the different levels of situational awareness presented above, many of these initiatives are designed to facilitate interactions between operational, tactical, and strategic levels in efforts to foster organizational learning.

Social Sector Influence on Network Management

Effective network managers are cognizant of the predilections and predispositions of the different organizations within the network and work to mitigate conflicts that arise between them. The challenges associated with serving two (or more) masters, or the “dual role” problem highlighted at the start of this chapter, cannot be resolved within the traditional hierarchical arrangement. The “unity of command” in hierarchies allows for a subordinate to be accountable to one supervisor. As we contemplate the role that network managers play within governance networks, we must consider the relationship between the network manager’s sectoral allegiances and his or her participation within a governance network. Our consideration of network management, most particularly as referenced in the discussion of participatory governance, has been grounded in a basic assumption: Network managers managing within governance networks are, by definition, public administrators. In this section, we discuss the relationship between network management and some of the basic, core tenets that have distinguished public administration from other managerial practices and professions. We begin the discussion by laying out the traditional view of the public administrator as an agent of government. We proceed to discuss how trends such as privatization, contracting out, and devolution have forced the field of public administration to integrate nonprofit management into its sphere of influence. Given the recognition that governance networks are managed to greater or lesser degrees by actors situated across the social sector, we ask the question of whether, under certain conditions, agents of for-profit businesses and corporations can or should be considered public administrators. As Bogason and Musso note, “network governance introduces ambiguity into the role of the public administrator” (2006, p. 6). We tackle this ambiguity in this section.

Public administrators as agents of governments. The definition of the public administrator as an agent of governments at whatever geographic level has been the classical view of the field. At the “street level” governments are represented within governance networks by those public administrators who represent their interests as a result of either being elected, politically appointed, or a member of the civil service and government workforce. Although we have noted how this representation can get complicated (Kootnz et al., 2004), the roles that public

administrators who are agents of governments play within governance networks are of critical importance to effective network governance and operations. Government agents bring a measure of “democratic anchorage” to the network, a point that we will turn to in Chapter 9. They may be mandated to ensure that network actors comply with regulations or contractual agreements. They may be stewards of the government resources, coming in all forms of capital resources.

Public administrators as agents of nonprofit organizations. In recent decades, it has been increasingly recognized that nonprofit managers are public administrators. The differences between government and nonprofit operations are noted, not the least of which is differing governance structures (a topic we turn to in Chapter 9). Nonprofit organizations exist as a legally discrete social sector actor, an argument that we made in the opening chapter. They play different roles in grant and contract agreements (where they are almost always the recipients of government funds) and public-private partnerships than their government and business counterparts.

However, many of the obligations that nonprofit organizations have to their interest groups or “publics” provide them with some measure of democratic anchorage. As voluntary associations, nonprofit organizations help to form the basis of civil society. The importance of civil society to the health and vibrancy of democratic societies has been widely noted (Couto and Guthrie, 1999). Nonprofit organizations likely have a comparative advantage of brokering trust between citizens and governments (Brinkerhoff and Brinkerhoff, 2011). From its early origins in the chartable associations of the 1800s, the nonprofit sector has been an instrumental actor in identifying and meeting public needs. To some degree, nonprofits have carried out similar functions as governments. Given this, the leap to consider nonprofit managers as public administrators of a certain type (much like we may distinguish city and town managers from federal level bureaucrats)² is a relatively simple one.

Public administrators as agents of for-profit organizations. The leap to consider the manager of a for-profit organization participating in a governance network as a public administrator may be harder to make. In order to determine whether we could consider a corporate or business manager a public administrator, we must ask questions relating to the characteristics of the private sector. On one hand, corporations are at liberty to pursue their self-interests as long as they remain within the law. As for-profit entities, they will most likely seek to maximize their profit. In order to accomplish this, they will likely seek the role that places them in the most advantageous positions that allow them to achieve their goals. This profit motive very likely filters down most directly into the role of the business or corporate manager. These managers owe their allegiances to

their supervisors, owners, and shareholders, a fact that leads to a fundamental distinction between public managers and private managers. It is difficult to think that an agent of a for-profit organization will bring democratic anchorage to the governance network of his or her own volition.

We have noted how corporations possess the rights provided to all legal citizens of the nation. In the United States, these rights have been won through a series of Supreme Court rulings. We must ask, however: With these rights, are corporations and other forms of for-profit organizations asked to carry out the responsibilities that are often ascribed to governments? Is it possible for corporations to sense an obligation to interests that lie beyond their self-interests? More importantly, is it possible for these more altruistic interests to actually shape the behavior of for-profit entities? Viewed from the lens of voluntary compliance, in which compliance is forged through the sharing of common norms, it is very unlikely that a case for considering business managers as public administrators can be made.

A more solid case for considering agents of for-profit organizations as public administrators can be made when coercive or remunerative forms of compliance are considered. Purchase of service contract agreements are most often based on terms negotiated between government principles and for-profit agents. The structure for resource exchanges is crafted as a series of remunerative, transactional agreements. A measure of codependence is achieved as a result. In theory, when compliance based on remunerative agreements is met, a business or corporate manager must share the same accountability structures that guide public administrative actions. The same may be said for instances of compliance with regulations and mandates. Thus, we may argue that *a for-profit firm's participation within a governance network renders the business managers representing their firm's interests accountable to serving the public interest in much the same way as public administrators working out of governments and nonprofits do.*

We do not suggest that we have resolved this matter here. We conclude, however, that more consideration must be given to the relationship between the sectoral characteristics of a governance network manager's organizational "home" and his or her identity as a public administrator. In the next chapter, we now know "sector blurring" may be leading to the blurring of public administrative principles and practices. This concern has been raised within the substantial critiques of NPM (see Denhardt and Denhardt, 2003, among others). These same critiques hold true within a network context. What is different here is distinguishing governance networks from other forms of interorganizational networks (such as supply chains or other types of strategic alliances forged to pursue private gain). By grounding network structures and functions within a framework of democratic governance, we assert that governance

network management rightly belongs among the other public administration paradigms.

The Gestalt of Network Management

In this chapter, we have emphasized that the three paradigms of public administration factor into a fourth, emergent paradigm that may best be labeled “governance network administration.” The essence of this managerial paradigm is best understood in Myrna Mandell’s notion that “network management implies the need to manage interdependencies” (1990, p. 49). In this regard, the mobilizing of behavior and resources will be a critical skill—perhaps a gestalt—in orchestrating governance networks.

The linkage between strategy formulation and strategy implementation is less clear when managing in an inter-organizational network. Unlike the intra-organizational perspective, a manager’s ability to correctly analyze the environment, in and of itself, will not be the overriding determinant of whether his or her strategies will prove effective. Instead, the idea of mobilization behavior and the marshaling of resources in order to first create a more viable environment will dominate behavior in an inter-organizational network.

(Mandell, 1990, p. 49)

Second, John Bryson, Barbara Crosby, and Melissa Stone have observed that network structures are “likely to change over time because of ambiguity of membership and complexity in local environments” (2006, p. 49). This ambiguity will be centered on how to accomplish network goals and to do so under the scrutiny of multiple forms of accountability, a topic that we will turn to in Chapter 9. According to Peter Bogason and Juliet Musso (2006), “network governance introduces ambiguity into the role of the public administrator and raises issues related to public accountability and efficiency” (Bogason and Musso, 2006, p. 6). The proliferation of such ambiguities leads to many of the central concerns raised within the literature concerning the hollowing of the state.

As we have noted in our discussion of boundary spanning and brokering, personal influence in the network, while difficult, will play a central role in achieving both network outcomes and network legitimacy. According, again, to Mandell,

effective network management therefore relies on members’ ability to influence others in horizontal, as well as hierarchical, relationships. To accomplish this, members will need to build pockets of commitment

both within and outside the network. The ability to achieve this relates to the social and political environment.

(Mandell, 1990, p. 42)

Extending personal influence within the governance network to ensure accountability and effectiveness will likely mean the repoliticization of the role of the public administrator. This repoliticization process has a significant bearing on the relationship between the sectoral allegiances of a manager's main organization and his or her allegiances to the governance network. According to Bogason and Musso, "network governance . . . repoliticizes public administration in a healthy manner by broadening the conceptualization of politics beyond the party." This reconceptualization "provides opportunities for cooperation, flexible responses, and collective social production" (Bogason and Musso, 2006, p. 6). We may argue that governance networks, dating back to some of their early foundations discussed in Chapter 1, have always been spaces for administrative as well as political processes and practices. The political nature of intergovernmental relations, the role of politics in contracting practices, and the existence of regulatory capture all point to the active role that politics has always played within and across network dynamics.

The role of the public administrator in governance networks will not be reflected in a list of singular action steps that, if followed, will result in success. More likely, their roles will emerge from an understanding and reckoning of these four themes. These four themes help to form the basis of a public administration gestalt for network management. In discussing this gestalt, Mandell references Porter and Warner, who "found that public administrators build a 'gestalt' (or understanding) as to which tasks will be performed by which organizations and from where resources will be drawn" (Mandell, 1990, p. 41). The role of the public administrator is to shape and be shaped by the nature of the interdependences of relationships, the ambiguity of those relationships and conditions, as well as by the goals the governance network seeks to achieve. This will undoubtedly be influenced by how interests and motivations are mustered by the public administrator and network participants and be a central consideration in our discussions of accountability and performance in Chapters 9 and 10.

Applications

In the section to follow two Applications are provided that highlight and inform our understanding of network management. Application J focuses on the managerial practices that may support the management of "urban regeneration," while Application K provides a tool designed to assess and support the development of more effective communities of practice.

APPLICATION J: MANAGING COMPLEXITY IN URBAN REGENERATION NETWORKS

Murphy, J., Rhodes, M. L., Meek, J. W., and Denyer, D. (2016). Managing the entanglement: Complexity leadership in public sector systems. *Public Administration Review*. DOI: 10.1111/puar.12698

Abstract

Complexity in public sector systems requires leaders to balance the administrative practices necessary to be aligned and efficient in the management of routine challenges, and the adaptive practices required to respond to dynamic circumstances. Conventional notions of leadership in the field of public administration do not fully explain the role of leadership in balancing the entanglement of formal, top-down, administrative functions and informal, emergent, adaptive functions within public sector settings with different levels of complexity. Drawing on and extending existing complexity leadership and network constructs, this paper explores how leadership is enacted over the duration of six urban regeneration projects, representing high, medium, and low levels of project complexity. The study suggests that greater attention needs to be paid to the tensions inherent in enabling leadership if actors are to cope with the complex, collaborative, cross-boundary, adaptive work in which they are increasingly engaged.

Methods

Multiple case studies; interviews; source document analysis

The cultivation of resilient and robust urban environments requires governance networks involving city governments, local community-based organizations, and local business and economic development enterprises. Oftentimes, these coordinated community economic development efforts will involve local network enablers who must “untangle” confusing relationships and ties.

The use of governance networks to build and sustain the resiliency of urban environments is predicated on the complexity of the problems and solutions facing a given community. Using case studies, source document analysis, and interviews, Murphy et al. (2016) develop a framework for managing networks in complex environments predicated on adaptive, enabling, and administrative

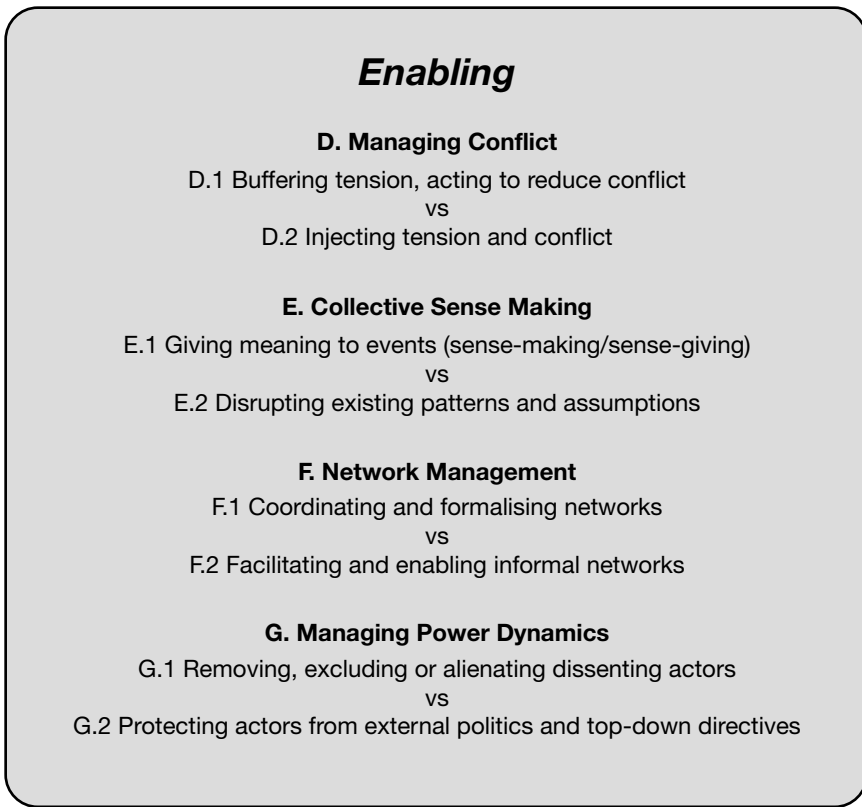


Figure J.1 Adaptive, Administrative, and Enabling Leadership Practices.

This framework of adaptive, enabling, and administrative practices was observed across multiple settings. Adapted from Murphy, J., Rhodes, M. L., Meek, J. W., and Denyer, D. (2016). Managing the entanglement: Complexity leadership in public sector systems. *Public Administration Review*.

practices that are interrelated and intertwined. Figure J.1, above, lays out this framework.

Some key findings and advances stemming from this study include:

- The multiplicity of actors, contexts, and objectives in complex public administration projects present distinct challenges to leaders, requiring a nuanced set of leadership practices.
- In low complexity environments *administrative* leadership practices such as directing, planning, and resourcing are common. In medium complexity

environments, *adaptive* practices, such as the inclusion of diverse skills and perspectives, appear to be important.

- *Adaptive* practices were observed to the greatest extent in the most complex cases, outnumbering administrative practices over 2 to 1.
- The need to actively support the inclusion of diverse skills/perspectives (including boundary spanning) was dominant, but other adaptive practices such as stimulating innovative ideas and changing plans, processes, and routines also featured to a greater extent than in the medium complexity cases (see Figure J.1).
- The role of enabling leadership in managing the tensions created by the need to achieve both a sense of stability in order to coordinate, structure, and control organizational activity (administrative) and the conditions for innovation, change, and transformation (adaptation).
- The paper shows that administrative and adaptive practices need not be mutually exclusive or conflicting but can enable each other.

APPLICATION K: CULTIVATING COMMUNITIES OF PRACTICE IN PUBLIC EDUCATION NETWORKS

Gajda, (Woodland) R., and Koliba, C. (2007). Evaluating the imperative of intra-organizational collaboration: A school improvement perspective. *American Journal of Evaluation*, 28(1), 26–44.

Abstract

Collaboration is a ubiquitously championed concept and widely recognized as the foundation on which the capacity for addressing complex issues and reaching essential outcomes is predicated. For those invested in the improvement of schooling, high quality collaboration has become no less than an organizational imperative. However, practitioners, policy makers, and other organizational stakeholders struggle to assess the quality of collaborative dynamics and the merits of collaborative structures. In this article, the authors build on existing collaboration theory to identify six fundamental characteristics of interpersonal collaboration: (1) shared purpose, (2) cycle of inquiry, (3) dialogue, (4) decision making, (5) action, and (6) evaluation. They share a series of steps and the Community of Practice-Collaboration Assessment Rubric (COP-CAR), which they have used to evaluate the quality of intra-organizational collaboration in statewide

school improvement initiatives. Evaluators in a wide range of organizational settings are encouraged to cultivate stakeholder capacity to understand, examine, and capitalize on the power of collaboration.

Methods

Interviews; focus groups

Public schooling can be understood within the context of governance networks. Figure K.1, below, illustrates how public education networks in most parts of the United States may be visualized. In this rendition, the United States Department of Education is placed at the bottom layer, followed by state legislatures, state school boards, and state agencies of education. School boards operating at a district-wide, supervisory union level govern districts. Other school boards may govern individual schools, which in turn are led by principals. Educators and students round out this schema.

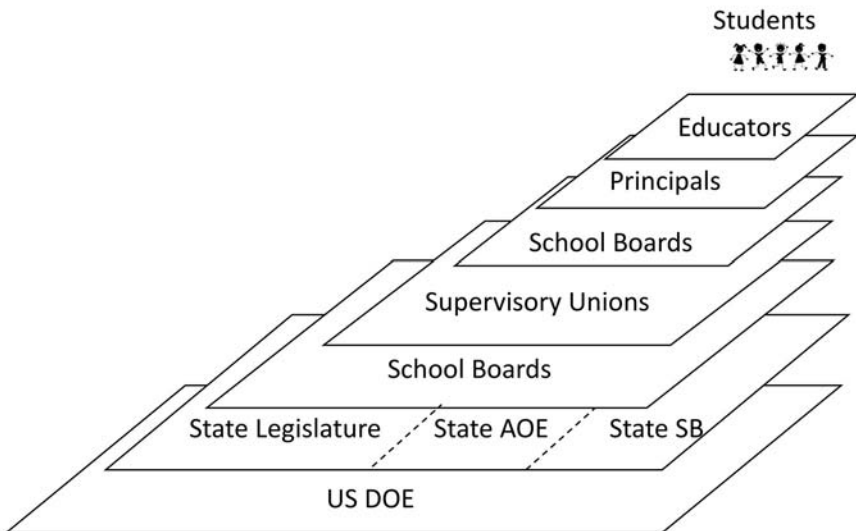


Figure K.1 Visual Representation of the Nested Nature of Public Education Networks.

This figure provides a basic visualization of the range of network actors responsible for providing public education to students (see top).

This particular article focuses on the engagement of educators in small groups work around efforts to review and support effective teaching practices. There are important lessons to be learned about the management of governance networks through examining the role of networks within specific organizations and institutions. The public education system in the United States has embraced the notion of professional learning communities as a vehicle for allowing educators to process effective teaching practices. In a 2007 study conducted by Gajda (now Woodland) and Koliba, these professional learning communities were studied in several schools using focus groups. Using community of practice (CoP) theory discussed in Chapter 8, they constructed a rubric to assess the quality of dialogue, decision making, action-taking, and evaluation (DDAE) cycle of inquiry that may occur in higher functioning groups. Focus groups of teachers operating in professional learning communities and other school governance committees and groups used this rubric to evaluate the quality of their group functioning. This rubric is provided in Figure K.2, below.

The integration of the rubric as an assessment tool for group dynamics is supported by the protocol found in Figure K.3, below. Gajda and Koliba use this protocol to direct the focus groups and provide opportunities for guided reflection. The rubric and protocol helped to deepen the situational awareness and systems thinking capacity of group members.

Some key findings and advances stemming from this study include:

- This article focuses on the cultivation of effective network management activities of small groups of educators working to improve teaching practices via a “professional learning community” approach (see Figure K.1).
- The conceptual advances in this article focus on the integration of John Goodlad’s “cycle of inquiry” into a framework for assessing collaboration in interpersonal, group, community of practice settings resulting in the Community of Practice-Collaborative Assessment Rubric (see Figure K.2).
- Dialogue, decision making, action, and evaluation stages of group collaborative practices are differentiated.
- The article offers a suggested process for using the COP-CAR with groups, including a group survey protocol (see Figure K.3) and a step-wise collaborative inquiry process.

Notes

1 (1988, p. 39).

2 The proliferation of nonprofit concentrations within MPA programs across the United States speaks to the inherent acceptance of nonprofit managers as public administrators within the field.

Community of Practice – Collaboration Assessment Rubric (CoPCAR)

The Lexus PLC (3)			Passes CoP Inspection (2)	Needs a Tune-Up (1)
DIALOGUE	1	Group membership is purposefully configured. All individuals essential to accomplishing the task/addressing the issue around which the group has formed are members.	Group membership is configured. Most of the individuals essential to accomplishing the task/addressing the issue around which the group has formed are members.	Group membership is unclear or not fully configured.
	2	A documented agenda is pre-planned, prioritized, and understood by group members prior to engaging in group dialogue.	A planned agenda to guide group dialogue usually exists before dialogue begins.	An agenda to guide group dialogue does not usually exist.
	3	Group regularly meets for face-to-face dialogue. Durations of meetings are sufficient and appropriate. Full attendance is the norm.	Group regularly meets for face-to-face dialogue. Almost full attendance is the norm.	Group does not meet regularly for face-to-face dialogue, OR full attendance at scheduled meetings is rare.
	4	Group dialogue is consistently used to analyze evidence related to practice AND the effects of practice on student learning.	Group discussion is usually related to making meaning of information related to practices OR the effects of practice on student learning.	Group discussion typically focuses on issues only indirectly related to pedagogical practice and student learning.
	5	Group discussion is guided by structure or protocol for analytical dialogue.	Process for dialogue tends to be improvisational.	Process for dialogue does not exist.
	6	ALL members regularly use the dialogue to publicly examine their beliefs and transform their assumptions.	Some members regularly use the dialogue to publicly examine their beliefs and transform their assumptions.	Few members use the dialogue to publicly examine their beliefs and transform their assumptions.
	7	Engagement in group dialogue is well-balanced. Everyone participates and shares responsibility for the dialogue; no one dominates or hibernates.	Engagement in group dialogue is usually balanced. Most everyone participates at some point.	Engagement in group dialogue is not well-balanced. There are those that regularly dominate and those that regularly hibernate.

Figure K.2 Community of Practice-Collaborative Assessment Rubric (COP-CAR).

The COP-CAR presented in this table can be used by practitioners to evaluate the quality of their dialogue, decision making, action, and evaluation cycles. Reprinted with authors' permission: Gajda, (Woodland) R., and Koliba, C. (2007). Evaluating the imperative of intra-organizational collaboration: A school improvement perspective. *American Journal of Evaluation*, 28(1), 26–44.

DIALOGUE			
8	Pedagogical and philosophical disagreements are regularly surfaced by group dialogue. All group members air and resolve all tasks/issues related disagreement inside face-to-face meetings.	Pedagogical and philosophical disagreements occasionally surface through group dialogue. Group works through disagreements when they arise.	Pedagogical and philosophical disagreements and constructive conflict do not exist or are unrecognized by group members.
9	All group members air and resolve all task/issue related disagreements publicly inside face-to-face meetings.	Most group members will air and resolve task/issue related disagreements inside face-to-face meetings, but some tend to air disagreements privately after meetings.	A significant portion of the group air disagreements outside of face-to-face meetings, leading to the avoidance of conflict and obstruction of group progress.
10	Group members share and regularly invoke and reaffirm their purpose: to cultivate student learning.	Group members have a shared purpose: to cultivate student learning. But it is not regularly invoked or reaffirmed.	Group members do not reaffirm or do not agree on a shared group purpose related to student learning.
11	Group makes ongoing decisions about the policies and practices that they will create, maintain, and change.	Group occasionally makes decisions about the policies and practices they will create, maintain, and/or change.	Group does not make decisions about pedagogical policies and practices on a regular basis.
12	Decisions are directly related to the cultivation of student learning (high-level, high-stakes decisions).	Decisions are generally related to the cultivation of student learning.	Group decisions have little to do with student learning (low-level, low-stakes decisions).
13	Decisions are consistently and fully informed by group dialogue.	Decisions are usually informed by some degree of group dialogue.	Decisions, when made, are minimally informed by group dialogue.
14	Process for making decisions is fully understood, transparent, and adhered to at every decision-making point by group members.	Process for making decisions is generally understood and adhered to at most decision-making points by group members.	A process for making decisions is not transparent, does not exist, or is not adhered to by group members.
15	Group is clear about its decision-making "zone of authority."	Group is somewhat clear about its decision-making "zone of authority."	Group is not clear about its decision-making "zone of authority."
16	Group leaders/facilitators are purposefully selected, visible, and accessible.	Group leaders/facilitators exist, but may not be purposefully selected, visible, or accessible.	Group leaders/facilitators do not exist or are not purposefully selected.
DECISION-MAKING			

Figure K.2 Community of Practice-Collaborative Assessment Rubric (COP-CAR) (continued).

ACTION			
17	All group members take regular individual action. These actions directly support group goals and are endorsed by the group decision-making process.	Most group members take regular individual action. These actions usually support group goals and are endorsed by the group decision-making process.	Few group members take regular individual action to support group goals.
18	Group member actions are pedagogically/professionally/philosophically complex and challenging.	Group member actions are somewhat pedagogically/professionally/philosophically challenging.	Group member actions are not pedagogically/professionally/philosophically challenging.
19	Actions of group members are intended to directly enhance student learning.	Group member actions are occasionally intended to enhance student learning.	Group member actions have marginal significance for students.
20	Action-taking among members is evenly distributed; there is a balance in member contributions. No one is burnt out or left out.	Distribution of group action-taking is usually or somewhat balanced.	Action-taking among members is not evenly distributed. One or more members may be burned out or left out.
21	Group members systematically collect and preserve evidence (numerical and narrative data) about their actions.	Group members collect and preserve some evidence (numerical and/or narrative data) about their actions.	Group members do not regularly collect or preserve any information about their actions.
22	Group members regularly and systematically collect evidence (numerical and narrative data) about student learning.	Group members collect some numerical and/or narrative data about student learning.	Group members do not collect any information about student learning.
23	Group members do not use "hearsay," "anecdotes," or "recollections" as evidence to evaluate practice/make decisions.	With some regularity, group members will use "hearsay," "anecdotes," or "recollections" as evidence to evaluate practice/make decisions.	Group members rely on "hearsay," "anecdotes," or "recollections" as evidence to evaluate practice/make decisions.
24	Group consistently uses evidence (numerical and narrative data) to frame group dialogue and decision-making.	Group occasionally uses evidence (numerical and narrative data) to frame group dialogue and decision-making.	Group rarely uses evidence (numerical and narrative data) to frame group dialogue and decision-making.
25	Group consistently accomplishes tasks and regularly establishes new short-term goals.	Group occasionally accomplishes tasks and establishes new short-term goals.	Group does not accomplish tasks or establish new short-term goals.
26	Group members regularly celebrate and publicly announce accomplishments.	Group members occasionally celebrate and publicly announce accomplishments.	Group members rarely celebrate and publicly announce accomplishments.

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Figure K.2 Community of Practice-Collaborative Assessment Rubric (COP-CAR) (continued).

Community of Practice Focus Group Interview Protocol**Introductory questions:**

- Please share your name and how you came to be a member of this CoP.
- Are there other members of this CoP who are not present at this time?
- What is the central purpose of this group?

In terms of dialogue/communication:

- What do you talk about together?
- How often do you convene to dialogue?
- How is your dialogue structured/facilitated?
- Describe the interpersonal dynamics of this group.
- What conflicts exist or have been worked through recently?
- How might your dialogue be improved?

In terms of decision-making:

- To what extent does your group make decisions?
- What types of decisions does this group typically make?
- What is your process for making decisions? (probe for consensus, majority, single person, etc.)
- How might your decision-making process be improved?

In terms of action-taking:

- What types of actions result from the decisions you make?
- How might your actions be improved?
- How do past actions inform the decisions you make?

In terms of evaluation:

- What types of information do you gather?
- What types of evidence informs your dialogue and decision-making?
- How do you determine whether and to what extent the actions you take are effective?
- How might your evaluation processes be improved?

Closing questions:

- What accomplishments are you most proud of?
- How and to what extent do the activities of your CoP inform the activities of others?

Figure K.3 Focus Group Protocol for Unpacking Professional Learning Community Practices.

The questions outlined in this figure have been used to guide focus group work with small groups. These questions are applicable to most any group setting. Reprinted with authors' permission: Gajda, (Woodland) R., and Koliba, C. (2007). Evaluating the imperative of intra-organizational collaboration: A school improvement perspective. *American Journal of Evaluation*, 28(1), 26–44.

Chapter 9

The Hybridized Accountability Regimes of Governance Networks¹

Adding actors does more than complexify, it tilts the balance of power.
—Laurence O'Toole and Kenneth Meier²

Many have noted how the shift from a monocentric system of *government* to a polycentric system of *governance* raises some serious accountability challenges (Behn, 2001; Posner, 2002; Page, 2004; O'Toole and Meier, 2004b; Pierre and Peters, 2005; Goldsmith and Eggers, 2004; Scott, 2006; Mashaw, 2006; Mathur and Skelcher, 2007). Given the wickedness of policy programs and the complexity of the networks composed to address them, network failures are not only possible, but very likely. Highly visible and tragically impactful events, such as the failure of response and recovery from Hurricane Katrina (Comfort, 2007; Koliba, Mills, and Zia, 2011), the space shuttle disasters (Romzek and Dubnick, 1987), the failure to identify the security threat prior to 9-11 (Comfort, 2002), the BP oil spill (Mills and Koliba, 2014), and the 2008 financial crisis (Kettl, 2009), were examples of failures of governance networks to provide services and regulate industries and were the result of failures in network accountability.

In governance networks, the state and its requisite governmental institutions coordinate activities and exchange resources with private and nonprofit organizations, resulting, at times, in the sharing of power with stakeholders from other social sectors. The picture of polycentric systems of governance that emerges

(Ostrom, Tiebout, and Warren, 1961; Mathur and Skelcher, 2007) is one in which both internal and external accountabilities are at work. These realizations have begun to shift emphasis away from the role of *government* to the proper configurations of the processes of *governance* that unfold amidst complex networks of individuals, organizations, and institutions. We have noted how the shift in focus to governance has coincided with the network turn in public administration, observing that governance becomes “the property of networks rather than as the product of any single centre of action (Johnston and Shearing, 2003, p. 148)” (Crawford, 2006, p. 458).

Governance and Accountability

Accountability is a critical element in governing processes and practices. In Chapter 7, we noted how accountability structures shape the feedback that drives the dynamics of complex systems. Writing about governing complex societies, Jon Pierre and Guy Peters observe that “the governance process is feedback, with the actions of instruments in the past being jointly evaluated and put back into the decision-making process. Governance has the same root word as ‘cybernetics’ and hence implies some connection to the environment and a continual adjustment of instruments (and perhaps even goals) in light of the success and failure of actions taken in the past” (2005, p. 15). To reiterate a point made earlier, governance needs to be understood as the processes that regulate the flow of feedback to and within the social system (Katz and Kahn, 1978). Such feedback may be derived through the internal dynamics occurring across the network or unfolding within individual actors of the network. Feedback may also be directed to the system from its external environment. Accountability structures operate in most any administrative setting as negative feedback loops (in the form of sanctions and punishments) and positive feedback (in the form of rewards and other incentives), playing a critical role in governing systems dynamics.

In Chapter 1, we noted Rod Rhodes’s assertion regarding the relationship between policy networks and governance. As one of the first scholars to deeply consider the relationship between governance and interorganizational networks, he argued that governance processes are guided by interdependencies shaped through their continuing interactions. He observed that these interactions take on “game-like” qualities (1997).

“Accountability is traditionally defined as the obligation to give an account of one’s actions to someone else, often balanced by a responsibility of that other to seek an account” (Scott, 2006, p. 175). In essence, accountability structures arise when a certain measure of interdependency exists between those rendering

accounts and those to whom accounts should be rendered (Papadopoulos, 2010). In this chapter, we discuss governance as accountability, with feedback taking place as processes of rendering accounts to particular constituencies, relying on certain explicit standards and tacit norms to do so. Network accountability is a property of a specific, contextually bound, complex system—one that is shaped by the accountability structures of the individual parts of the network, and the emergence of “hybridized accountability regimes” of the network as a whole (Mashaw, 2006).

Referring to the trend toward governance networks, Laurence O’Toole and Ken Meier have noted that “adding actors does more than complexify, it [can] tilt the balance of power” (2004a, p. 684). Others have noted the accountability challenges associated with governance networks, recognizing their complexity and the potential competing aims inherent to the organizations operating within them (Page, 2004; Posner, 2002; Newman, 2004; Behn, 2001; Van Slyke and Roch, 2004; Papadopoulos, 2010). Jerry Mashaw first called for distinguishing between accountability regimes operating within and across network structures in order to “evaluate their differential capacities, and perhaps articulate hybrid regimes that approximate optimal institutional designs” (Mashaw, 2006, p. 118). In cases where a governance network is comprised of nonprofit and for-profit organizations working with governments, the accountability regimes historically ascribed to governments are not sufficient. “Conventional accountability narratives, emphasizing *ex post* and hierarchical forms of accountability, with only very limited reach beyond the state actors, are unable to support the burden of providing a narrative of accountability that can legitimate governance structures involving diffuse actors and methods” (Scott, 2006, p. 190).

It is apparent to those who have examined the accountability challenges associated with governance networks that new accountability models are needed to recognize their inherently intersectoral nature. We need to recognize that the accountability structures of individual organizational actors interrelate with the accountability structures of other organizations in the network. For example, within a simple binary network relationship between a government entity and a for-profit firm, the government’s adherence to political or bureaucratic accountability structures may compete against the firm’s need to earn a profit. Rarely have these kind of trade-offs been explored in a systematic way.

Each of the three social sectors that we have examined thus far (e.g., public, private, and nonprofit sectors) is constructed around particular compositions of accountability frames and types. Although we recognize the principle of holism that asserts that the whole amounts to more than the sum of its parts (Degenne and Forse, 1999), we must also critically view the extent to which the governance frameworks of particular network actors will have an impact on the hybridized accountability regimes that emerge through the ongoing operations of a

governance network. In the sections to follow we explore the differences between modes of governance across the three social sectors, drawing distinctions and similarities occurring between them.

Modes of Sector Governance

One way to examine the accountability structures of different governance network actors is to review the literature pertaining to accountability within the public (Romzek and Dubnick, 1987; deLeon, 1998; Denhardt and Denhardt, 2003), corporate (Smith, 1998; Scott, 2006), and nonprofit (Kearns, 1996; Brooks, 2002; Stone and Ostrower, 2007) sectors, in addition to the literature that looks at the differences between accountability structures across sectors (Behn, 2001; Riemer, 2001; Minow, 2002; Mashaw 2006; Papadopoulos, 2010). In Chapter 4, we introduced the possibility that the sectoral characteristics of particular network actors will influence their motivations and “value propositions” toward their participation in governance networks (see Koliba, Wiltshire et al., 2016).

Considering the potential for sector blurring that may occur in some governance networks, we must consider how and to what extent distinctions between the governance and accountability structures of governments, for-profit firms, and nonprofit organizations contribute to the development of network-wide accountability regimes.

Corporate governance can be framed in terms of the interplay of owners or shareholders, boards of directors, managers, and consumers (Anand, 2008), as well as adherence to legal requirements dictated by laws and regulations sanctioned by the state. Although critical theorists and neo-Marxist social scientists have raised concerns about the growing influence of corporate power within democratic societies, very few of these critiques have found their way into mainstream considerations of privatization and public-private partnerships (see Stoker, 1998; Jessop, 1999; Catlaw, 2009). Corporations exist, first and foremost, to earn profits for their owners/shareholders. Although there has been increased interest in adding corporate social responsibility norms into the existing corporate governance formula (see, for instance, Fox, Ward, and Howard, 2002; Crane and Matten, 2007), the essence of corporate governance remains the interplay between boards of directors and shareholders, managers, in some instances labor unions, and the legal system that sets viable parameters around corporate activities. An argument can be made to add consumers into this framework, a point we will return to later in this chapter. The overarching performance standard of the private sector is profit, and specifically the profit that accrues when specific goods and services are purchased and consumed.

Nonprofit governance is informed by interest group theories that assert how citizens join or associate with voluntary associations, organizing their collectivized

interests into formal or informal interest groups. Nonprofit organizations also exist to meet unmet societal needs, providing public services and, essentially, filling gaps left in government's direct delivery of public goods and services (Salamon, 2002a). Within the literature, the governance structures of nonprofits have been understood in terms of board composition and development (Stone and Ostrower, 2007, p. 419). In summing up this literature, Melissa Stone and Francie Ostrower observe: "Findings suggest that within nonprofits themselves, there are widely varying perspectives and expectations among board members and between the board and CEO concerning board roles and responsibilities. Furthermore, external factors, such as variations in funding environments, may significantly influence board composition and what a board does" (2007, p. 421). Of the three sectors that can participate within governance networks, the governance structures of nonprofit actors appear to be the most contextual and fluid. The overarching performance standard of the nonprofit sector is meeting the organizational mission, another facet of nonprofit governance that is highly context specific and situational.

Although the prestige of government has suffered over the years, the relevance of state sovereignty and the contractual obligation that states have to their citizens are still extremely critical to the functioning of governance networks. Governments bring several critically important functions and resources to governance networks, including funneling symbolic power and cultural authority to the network; informing public perceptions of the network, lending it legitimacy; and allocating distinctive (tactical) resources and providing sources of information through which interests are pursued (Crawford, 2006, p. 459). Governments lend legitimacy to a governance network; they formally (via elected officials) and informally (through representative bureaucracies) represent citizens in general as well as particular interest groups, contribute resources to the network, share and redistribute risks, and play a vital role in framing public problems and potential solutions.

The governance of governments is probably best understood in the context of sovereignty and the balance of powers across branches of government. Government has traditionally been construed in terms of the iconic public bureaucracy, through which elected officials make political appointments, who in turn work with career civil servants to provide a wide range of public services. Citizens play a critical role in the governance of governments in democratic societies by actively selecting their representatives, as well as their direct engagement with their governments (see the discussion of collaborative and participatory governance in Chapter 8). Ideally, elected officials also play a pivotal role in ensuring that governments operate democratically. The performance standard unique to the state sector is meeting public needs and delivering public policy.

Table 9.1 Characteristics of Sector Governance

<i>Social Sector</i>	<i>Organizational Actors</i>	<i>To Whom Accountabilities Are Rendered</i>	<i>Predominant Performance Standard(s)</i>
Public	Governments (national, state, regional, local)	Citizens and interest groups; elected officials; legal systems	Policy goals; meeting public needs; implementing policies
Nonprofit	Nonprofit organizations (NGOs)	Citizens and interest groups; boards of directors; clients; legal systems	Fulfillment of mission
Private	Corporations, firms, businesses (for-profit organizations)	Owners/shareholders; customers; labor unions; boards of directors; legal systems	Profit

The sectoral characteristics of specific actors operating within governance networks highlight the importance that “nodal” governance plays vis-à-vis the governance of the entire system. “Nodal governance . . . [focuses] attention on bringing more clarity to the internal characteristics of nodes and thus to the analysis of how power is actually created and exercised within a social system. While power is transmitted across networks, the actual points where knowledge and capacity are mobilized for transmission is the node (Burris, 2004, p. 341)” (Crawford, 2006, p. 458). At this juncture, very little is known about how the different governance structures of the nodes (informed, at least in part, through sectoral characteristics) inform the governance of the entire governance network. A view of the difference in performance standards across the public, private, and nonprofit sectors connotes a continuum of clearly defined measures: near universal measures (such as profit), to the ambiguity-riddled challenges of measuring successful public policies (Stone, 2002), to the highly context-specific and mostly localized performance standards ascribed to individual nonprofit organizations (Stone and Ostrower, 2007).

Table 9.1 illustrates a basic overview of the differences in governance between the public, private, and nonprofit sectors. Interests are defined here to mean those points of view and perspectives that either in theory or in practice govern

individual organizations' capacities to act and exchange resources within networks. These interests are the formal or informal principals "to whom" accounts must be rendered by other agents. As contributors to organizations' accountability structures, the formal and informal directives from these interests influence how organizations behave, make decisions, and distribute resources. These accountability structures are described in terms of the governance characteristics of governments, corporations, and nonprofit organizations.

Corporate Governance

Multiple influences may affect the operations of a corporation. These influences may be external factors, such as markets forces, legal constraints, and customer preferences or internal factors, such as shareholder and board, and labor and management dynamics. The complexity of these varying influences call on corporations to respond effectively to multiple demands. It is within a framework of corporate governance that managers function and determine the most appropriate responses to all internal and external influences.

According to the Organization for Economic Cooperation and Development (OECD, 2004), there is "no single model of good corporate governance" (p. 13). Rather, there are numerous best practices that exist and certain principles that should be followed to ensure appropriate governance structures. In a 2004 document, the OECD defined a set of principles of corporate governance as involving

a set of relationships between a company's management, its board, its share-holders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.

(OECD, 2004, p. 11)

OECD (2004) identifies six principles in which structures of corporate governance should be situated. These principles provide a general framework for corporate governance, yet remain adaptable to accommodate the needs of a specific corporation.

1. The corporate governance framework should promote transparent and efficient markets, be consistent with the rule of law, and clearly articulate the division of responsibilities among different supervisory, regulatory, and enforcement authorities.

2. The corporate governance framework should protect and facilitate the exercise of shareholders' rights.
3. The corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights.
4. The corporate governance framework should recognize the rights of stakeholders established by law or through mutual agreements and encourage active cooperation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises.
5. The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company.
6. The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders (pp. 17–24).

Corporate governance has been described in terms of agency theory, in which corporations are conceived as two parties—managers and investors—with corporate governance often seen as the mechanism used to bridge these two separate parties (Johnson, Daily, and Ellstrand, 1996). Agency theory typically depicts managers as self-interested entities; therefore, corporate governance structures are enacted not only to bridge the gap between managers and owners/shareholders, but to protect owners/shareholders from self-interested managers (Johnson, Daily, and Ellstrand, 1996). Primarily, the idea behind agency theory is to separate those who finance the corporation from those that manage it (Shleifer and Vishny, 1997). One would want to ensure structures that limit the potential of managers taking unwarranted salaries or other types of compensation arrangements.

The extent to which a corporation's accountability structure extends beyond the binary relationship between owners and management is a matter that is of critical importance when considered in light of governance networks. A continuum may stretch from those who believe corporations hold responsibilities to the greater society that they function within, to those who assert that a corporation's accountability should be almost exclusively to the owners of the company. This continuum is anchored by two extremes that Dunfee (1999) refers to as the monotonic view and the pluralist view.

Economist Milton Friedman is often associated with the monotonic view. The monotonic view places the owner or shareholder as the only principal to whom accounts should be rendered. In 1970, he claimed that the expansion

of corporate accountability to a broader array of stakeholders was “pure unadulterated socialism,” and that business executives’ responsibilities lie with the desires of “the owners of the business to make as much money as possible” (1970, p. 17). He and other advocates of the monotonic view believe in increasing shareholders’ profits, placing very little emphasis on the wider community within which the corporation operates. This view is referred to by legal scholars as the *shareholder primacy norm*, in which “corporate directors have a fiduciary duty to make decisions that are in the best interests of the shareholders” (Smith, 1998, p. 278). Advocates of this view believe that corporate operations that accomplish goals outside of increasing shareholder profit should be forbidden, or in the very least not the subject of much consideration (Dunfee, 1999). Shareholders, it is held, invest in corporations to increase their own wealth (Bainbridge, 1993).

Although there is discrepancy concerning the rationale for shareholder primacy, it is believed to be a common and “obvious” corporate philosophy (Sundaram and Inkpen, 2004, p. 350). Justifications in favor of shareholder primacy include the promotion of entrepreneurial risk for managers, providing managers with one clear objective rather than a vague array of goals, and a lack of legal protection for shareholders that can readily be sought by stakeholders in the legal and political environment (Sundaram and Inkpen, 2004).

The relationship between shareholder influence over corporate performance is complex at best. Some empirical studies of the use of internal governance mechanisms such as proxy voting and internal monitoring practices and the performance of stock prices suggest an inverse relationship between extent of shareholder engagement and company performance (Cremers and Nair, 2005). This inverse correlation may, in part, be mitigated by the extent to which a corporation’s prior performance is considered, as more direct internal governance activities may be stimulated by poor performance (Karpoff, Malatesta, and Walkling, 1996). Shareholders may get more involved when they are not satisfied with the company’s performance.

On the other side of the continuum lies the pluralist view. Those advocating this view see the corporation as a member of a larger public and stress that it must act in congruence with the public interest. The pluralist view acknowledges responsibility to both the shareholders and the stakeholders of the corporation (Dunfee, 1999). Stakeholders encompass a broader constituency that can be identified as “suppliers, distributors, creditors, local communities, consumers, and the federal or state government” (Dunfee, 1999, p. 131). Within this broadened view, the corporation is asked to consider a more pluralist array of interests when making its decisions. Advocates of this view usually try to strike a moderate tone, claiming that it is not necessary for the corporation to please all of these stakeholders; however, it is of great importance that the corporation makes responsible, ethical decisions concerning these stakeholders.

This view may be traced back, philosophically, to Rousseau's notion of the social contract (2006), as well as to considerations given to the nature of externalities that exist in any economic transaction (Tullock, 1996). Lastly, systems theorists remind us that individuals and organizations do not exist in a vacuum, suggesting that all actors, including corporations, need to rely on reciprocating systems of social organization. Corporations rely on public infrastructures across all functions of their business operations. Obvious examples, such as roads, clean air, EMT services, and even the judicial system, are necessary public goods and expenditures utilized by corporations. As such, a corporation carries with it certain obligations to contribute to the public good. Therefore, to a certain degree, all corporations need to be mindful of their stakeholders, very broadly construed.

Turnbull (1997) identifies a much broader scope in which to study corporate governance. His perspective is shaped around a wider array of influences on corporate governance, encompassing all factors that may affect a corporation. Turnbull (1997) also suggests viewing corporate governance through the lenses of culture, power, and cybernetics. Each of these views provides a different vantage point, but each relies on the interaction of various influences on the corporation. These viewpoints allow corporate governance to be examined from the perspective of broad influences such as social interactions, cultural norms, and power relationships. Corporate governance therefore is a product of multiple influences that are not accounted for within classical agency theory.

If for-profit firms are implicated within a governance network, the range of possible stakeholders exerting influence on the corporation's behaviors gets mitigated through the dominance of one performance measure in particular: profit. To the owners of a company, whether they are private owners or shareholders (in the case of publicly traded companies), the capacity of the firm to make a profit becomes paramount. We argue that the profit motive derived through shareholder/owner accountability serves as the principal performance standard around which a business or firm is measured. A firm's performance is, of course, mediated through markets.

Customers, the target of most firms' business, also wield significant power within a corporation's governance structure through expressions of their purchasing power by buying or boycotting the corporation's goods and services. Customer preferences shape revenue, which in turn influence owner and shareholder perceptions. A firm's practices or products may generate poor public relations and lead to intentional boycotts and/or poor sales.

Organized labor can also wield some power over the internal governance of corporations (Salisbury, 1969; Botero et al., 2004). Contract negotiations, whistleblowing, grievance procedures, and workforce and labor migration are all boundary objects through which labor and their unions influence corporate governance. Recent work by Mills, Koliba, and Reiss (2016) highlights the

EXTERNAL INFLUENCES ON A CORPORATION

Customers
 Competitors
 Shareholders
 Employees
 Unions
 Suppliers
 Bankers and financiers
 Professional associations
 Trade associations
 Directors and advisors
 Regulators

Source: Turnbull (1997). Corporate Governance: An International Review, 5, 180–205.

important role labor unions play in shaping outcomes in regulatory governance networks surrounding aviation safety.

Later in the chapter, we discuss the extent to which a corporation's involvement in a governance network leads to a widening of the scope of stakeholders to whom a corporation needs to render accounts. These stakeholders may not only include those most directly involved in a firm's day-to-day practices, but wider, more publicly construed, interests captured within the drives for corporate social responsibility and the triple bottom line.

Nonprofit Governance

Although there are multiple influences that may impact the actions of nonprofit organizations, the board of directors has been widely recognized as the chief focus of the nonprofit governance literature for the past twenty years. Ultimately, "nonprofit organizations can only be said to articulate their objectives and formulate their plans when their governors—their boards of directors or executive officers—take action" (Smith and Lipsky, 1993, p. 72). However, nonprofit organizations contribute to civil society and "are important to our concepts of community and citizen empowerment because they represent the efforts of people to take collective action outside the umbrella of government" (Smith and Lipsky, 1993, p. 72). As voluntary associations, we have already noted that nonprofit organizations play a significant role in mediating the relationships between interests and the policy process. We may view the range of actors to

whom nonprofit organizations are accountable through monocentric and pluralistic lenses—ranging from governance residing exclusively on the shoulders of boards of directors to the multiple constituencies of nonprofit organizations, including clients, funders, and represented interests.

In surveying the depth and breadth of the nonprofit governance literature, Melissa Stone and Francie Ostrower observed that there is “a widely held belief that governance in nonprofit organizations is the province of their boards of directors and has to do with organization-level control, accountability, and managing resource dependencies (Stone, 1996; Miller-Millesen, 2003)” (Stone and Ostrower, 2007, p. 418). They note how “nonprofit legal scholars . . . address governance as fulfilling legal and fiduciary responsibilities, most particularly the need for the board to comply with duty of care and duty of loyalty standards” (Stone and Ostrower, 2007, p. 417). The 2002 Sarbanes-Oxley Act has impacted nonprofits by focusing federal attention on nonprofit governance issues, shedding particular light on the role of nonprofit boards in carrying out their critical, fiduciary responsibilities (Stone and Ostrower, 2007, p. 430). It has been observed that the greater the stress placed on fiduciary accountability over other governing responsibilities, the more that nonprofit boards tend to micromanage (p. 429). Despite the attention given to boards to date, “very few studies . . . have asked whether and how board composition affects measures of organizational performance” (Stone and Ostrower, 2007, pp. 419–420).

Because nonprofit organizations “mediate between the interests of their constituents and public policy or the political process” (Couto and Guthrie, 1999, pp. 46–47), many other stakeholders may be implicated in their accountability structures, “including executive directors, staff, volunteers, donors, and beneficiaries,” all of whom “are likely to influence organizational mission, major policies, executive director performance, and external relationships” (Stone and Ostrower, 2007, p. 418). The pluralistic view of nonprofit governance broadens the scope of stakeholders, shedding light on the “external boundaries of nonprofits (Chait, Ryan, and Taylor, 2005; McCambridge, 2004)” (Stone and Ostrower, 2007, p. 418). These external boundaries extend into the murky waters of interest group formation and representation.

Summarizing studies of nonprofit governance, Stone and Ostrower suggest rather fluid and contextually-driven accountability structures for the sector:

Findings suggest that within nonprofits themselves, there are widely varying perspectives and expectations among board members and between the board and CEO concerning board roles and responsibilities. Furthermore, external factors, such as variations in funding environments, may significantly influence board composition and what a board does.

(Stone and Ostrower, 2007, p. 421)

Owing to the lack of research in this area, the extent to which boards are attentive to external interests is not known. “Do boards see themselves as solely responsible for doing what is best for their organizations or do they see themselves as charged with a responsibility to a wider public, and how do they define that public?” Stone and Ostrower conclude that “What we know virtually nothing about, however, is whether and how nonprofit board members think about their relationship to the broader public interest as well as their own organization” (2007, p. 428).³ They conclude that “board effectiveness is a negotiated and highly contingent concept” (Stone and Ostrower, 2007, p. 422).

The interpersonal dynamics of nonprofit boards of directors will likely play a significant role in determining how and to what extent boards are stronger or weaker entities to whom accounts need to be rendered. Likewise, the extent to which nonprofit organizations are accountable to interest groups, their clientele, and citizens at large may tend to be forged on weaker ties. We consider the impact of what the governance structures of nonprofit actors bring to a governance network later in this chapter when we discuss the implications of sector blurring.

Governance of Governments

Vested with sovereign authorities, governments operating within democracies are purposively constructed to be accountable to the multiple stakeholders found within and across a pluralistic, democratic society. The separation of powers structures the nature of network relations arising between branches of government (see Chapter 1) and also plays a role in the accountability and operational structures of individual governmental actors, particularly those found in the executive branch. David Rosenbloom’s application of separation of powers to public administrative theory suggests the ways that the administrative branches of government actors are shaped through the interactions of managerial, political, and legal forces. “The basic concept behind pluralism within public administration is that since the administrative branch is a policy-making center of government, it must be structured to enable faction to counteract faction by providing political representation to a comprehensive variety of the organized political, economic, and social interests that are found in the society at large” (Rosenbloom, 2004, p. 449).

Rosenbloom discusses the managerial factors shaping public administration in terms of the public bureaucracies of the executive branch and the organizational hierarchies that compose this branch of government. Much has been written regarding the managerial functions of public bureaucrats, most classically represented in Luther Gulick’s POSDCORB model (2004). Managerial relationships get structured through the principles of unity of command and the span of control. The classical view of management is grounded in hierarchical,

vertically aligned organizational structures. The chief historical concerns arising here have been focused on the limits of rationality (Simon, 1957), ethical neutrality (Thompson, 2004), and the potential dehumanizing effects that public bureaucracies bring to both the people who work in them (Arendt, 1973) and those whom they are supposed to serve. In governments, the managerial principal actors “to whom” accounts need to be rendered are those situated at the top of the public bureaucracy.

The role of politics in the administration of public bureaucracies has been a prominent topic for the public administration field, ranging from Woodrow Wilson (1887) and Frank Goodnow’s (2004) early calls for the separation of politics and administration, to Paul Appleby’s recognition that politics plays a big role in the day-to-day practices of most public bureaucracies (2004), to Phillip Selznick’s discussion of the role of politics and citizen participation as a form of cooptation (2003). Across these threads of discussion has been the assumption, first captured by Karl Mannheim, that “bureaucracy turns all political issues into matters of administration” (1936, p. 118). Echoing this observation, a general consensus has emerged that public administrators are political actors and, more specifically, policy makers when they interpret and enforce rules and regulations set forth in laws and statutes. Frederick Mosher discussed the role of politics in the life of public administrators this way:

Public administrators are heavily engaged in policy and politics a good share of their time, but much of this activity is of a different order of politics from that represented by political parties, elections, and votes in the Congress. It is controversy, competition, and negotiation among different factions within the bureaucracy itself. It consists in dealing with, responding to, or resisting clienteles and other interest groups outside the bureaucracy, and dealing with Congressional groups and other individual congressmen.

(Mosher, 1982, p. 95)

March and Olsen define politics as “aggregating individual preferences into collective actions by some procedures of rational bargaining, negotiation, coalition formation, and exchange (Riker, 1962; Coleman, 1966; Downs, 1967; Niskanen, 1972; Taylor, 1975)” (March and Olsen, 1995, p. 7). In essence, politics both results from and contributes to negotiation and bargaining processes. Lower-case *p* politics unfolds as the result of negotiated meaning, positioning, and other “games” (Rhodes, 1997) that result through the phenomena of everyday actors and resource exchanges. Capital *P* politics can be found in the electoral process, the role and influence of political parties, and the creation of interest group coalitions designed to impact the decisions and actions of sovereign governments.

The role of capital *P* politics in the accountability structures of democratic governments may be found in the deference paid to elected representatives and citizens. Democratic governments are chiefly accountable to the public at large, vested with the authority to carry out the public's interest. As sovereign authorities, governments are contractually anchored to their citizenry. This relationship requires that governments have the legitimate authority to make decisions and carry out actions on behalf of the public. Citizens, in turn, have the legitimate authority to petition their government, and attempt to exert their influence over the government through the election of representatives, the passing of referendums, etc. As elected representatives, presidents, governors, mayors, legislators, and in some cases, judges get elected to serve the interests of their constituencies. Elected officials play a major role as principals in the accountability structures of governments.

Rosenbloom reminds us that government agencies are also beholden to legal rulings and precedence, while in some cases government agencies "begin to function more like courts and consequently legal values come to play a greater role in their activities" (Rosenbloom, 2004, p. 451). The legal values of procedural due process, substantive rights, and equity become factors in ensuring the legal accountability structures of governments. Written constitutions and charters also form the basis of constitutional laws that provides a set of rights to citizens and the institutions they sanction.

ACCOUNTABILITY PRINCIPLES OF THE LEGAL SYSTEM

Procedural due process: "The term stands for the value of fundamental fairness and is viewed as requiring procedures designed to protect individuals from malicious, arbitrary, capricious, or unconstitutional harm."

Substantive rights: "Maximization of individual rights and liberties as a positive good and necessary feature of the U.S. political system."

Equity: "Stands for the value of fairness in the result of conflicts between private parties and the government. It militates against arbitrary or invidious treatment of individuals, encompasses much of the constitutional requirement of equal protection, and enables the courts to fashion relief for individuals whose constitutional rights have been violated by administrative action."

Source: Rosenbloom, in Shafritz, Hyde, and Parkes (Eds.). (2004). *Classics of public administration* (5th ed., pp. 451–452). Belmont, CA; Wadsworth/Thomson Learning.

Table 9.2 Maas and Radway's Accountabilities of Government

<i>Government Agencies Are Responsible to</i>	<i>Working Bias</i>	<i>Accountability Rendered to</i>
People at large	"An administrative agency cannot and should not normally be held directly responsible to the people at large." (p. 166)	Citizens
People—pressure groups	"An administrative agency should be responsible to pressure groups so far as necessary to equalize opportunities for safeguarding interests, to acquire specialized knowledge, and to secure consent for its own program." (p. 167)	Citizens
Legislature	"An administrative agency should be responsible to the legislature, but only through the chief executive, and primarily for broad issues of public policy and general administrative performance." (p. 169)	Elected representatives
Chief executive	"An administrative agency should be directly responsible for conforming to the general program of the chief executive and for coordinating its activities with other agencies of the executive branch." (p. 173)	Elected representatives
Political parties	"An administrative agency cannot be held independently responsible to the organization or policies of political parties." (p. 175)	Citizens
Profession	"An administrative agency should be responsible for maintaining, developing, and applying such professional standards as may be relevant to its activities." (p. 176)	Professions
Courts	"Judicial review is largely a negative, post hoc, and unduly ritualized check addressed to errors of commission." (p. 178)	Courts

Source: Adapted from Maas and Radway (2001).

The government functions of courts and judges play pivotal roles in mediating conflicts, interpreting and enforcing laws, and ensuring contractual agreements are adhered to across all segments of society. As particular governmental actors, courts play a privileged role in governance networks, most particularly in criminal justice systems. Courts most often serve as external, peripheral actors who may wield significant authority to hold network actors accountable.

The accountability structures operating within governments have been widely discussed, ranging from Robert Dahl's considerations of democratic structures and norms in the 1940s (1947) to Maas and Radway's articulation of the responsibilities of government (1959). Table 9.2 presents an overview of Maas and Radway's consideration of governments' responsibilities, including the "working bias" that has historically coincided with them.

The importance of this multiplicity of accounters and accountees involved in the "governance of governments" is best described in the governance network literature as "democratic anchorage" (Sorensen and Torfing, 2005).

Democratic Anchorage

Accountability in democratic societies has traditionally been predicated on the legitimacy that accompanies the kinds of sovereign entities found in local, state, and national governments (Lipset, 1959). The substantial shift from accountability predicated on governments to accountability found within and across governance networks focuses important attention on the fate of state sovereignty and the qualities of democratic anchorage that have been traditionally ascribed to it.

Studies of social cliques and group thinking within interpersonal networks demonstrate how social capital can give rise to the exercise of power free of accountability or of the knowledge and insights that flow through permeable network boundaries. Bogason and Musso summarize the potential threats that antidemocratic networks pose to democratic accountability: "There are dangers that interest groups and political insiders will manipulate the system for their own gains and to the dis-advantage of those who do not have the resources to organize. . . . And in any democratic system, there is a tendency for more powerful factions to overwhelm the weak and to perpetuate their advantage through institutional means" (Bogason and Musso, 2006, p. 14).

A governance network's capacity to support or hinder democratic accountability hinges on its capacity to be what Eva Sorensen and Jacob Torfing (2005) describe as democratically anchored. Sorensen and Torfing assert that "governance networks are democratically anchored to the extent that they are properly linked to different political constituencies and to a relevant set of democratic norms

that are part of the democratic ethos of society” (2005, p. 201). They go on to define democratic anchorage as comprising some kind of combination of:

- A. Control by democratically elected politicians;
- B. Accountable to the territorially defined citizenry;
- C. Representation of the membership basis of the participating groups and organizations; and
- D. Following the democratic rules specified by a particular grammar of conduct.

(Sorensen and Torfing, 2005, p. 201)

The democratic anchorage of a governance network needs to be construed as a matter of degree, and not in absolute terms. As sovereign entities, governments play a critical role in the democratic anchorage of governance networks. States contribute to the democratic anchorage of a governance network most directly through the privileged position that elected officials play as representatives of territorially defined citizenry. If government actors play little or weak roles in a governance network, democratic anchorage will likely be less, as the resultant networks would “resist government steering, develop their own policies and mold their environment” (Kickert, Klijn, and Koppenjan, 1997b, p. xii).

Governments as sovereign entities as well as most nonprofit, voluntary associations possess certain measures of “discursive” legitimacy. Discursive legitimacy “allows some organizations and individuals to speak on behalf of issues because of their ability to mobilize support from [interest] groups” (Rodriguez et al., 2007, p. 155).

Sorensen and Torfing do not assume that democratic anchorage lies squarely on the shoulders of government actors. Democratic anchorage also depends on the degree of democratic legitimacy that nonprofit, voluntary associations bring to the network. For interest groups and collective action organizations to

GOVERNMENT ROLES

- Funnel symbolic power and cultural authority to the network;
- Inform public perceptions of the network, lending it legitimacy;
- Allocate distinctive (tactical) resources and provide sources of information through which interests are pursued; and
- Be a back-up of last resort with regard to other forms of control.

Source: Crawford (2006). *Theoretical Criminology*, 10, 459.

bring a measure of democratic anchorage to a governance network, they need to legitimately represent their membership, constituency, or client bases. Nonprofit, voluntary associations have been described as playing the role of mediating institutions. “They mediate between the interests of their constituents and public policy or the political process; they play roles within the game of politics as government and governing” (Couto and Guthrie, 1999, pp. 46–47).

Another dimension of democratic anchorage of a governance network will hinge on the extent to which democratic norms, rules, and “grammar of conduct” are employed in the coordination of network activity. Presumably, a democratic grammar of conduct is shaped by legal standards (constitutional law, the rule of law, etc.), political norms (appeals to equity, liberty, and fairness), and administrative practice (sound and fair bargaining and negotiation practices). Democratic rules are also informed by the central norms associated with building horizontal ties: honesty, trust, and reputation.

In addition to sovereignty, democratic rules and the discursive legacy from representation that comes through governments and nonprofits, the idea of “public value,” public goods, and public interests are critical to democratic anchorage (Stoker, 2005, 2006). The role of networks and public value are an important consideration. In-depth discussions of network and public value may be found in the works of Gerry Stoker (2005, 2006), Robert Agranoff (2006), Barry Bozeman (1987, 2007), and John Bryson, Barbara Crosby, and Laura Bloomberg (2014). The integration with the process-oriented features of democratic anchorage highlighted by Eva Sorensen and Jacob Torfing (2005) with the ongoing consideration of public goods, the public interest, public value, and the like tie the ends (e.g., adding public value) with the means (e.g., democratically anchored practices).

Accountability Relationships between Network Actors

Some core ideas to be defined here are a working definition of accountability and the explicit and implicit standards and norms that characterize specific accountability relationships or ties. Colin Scott defines accountability at the level of ties between two actors as “the obligation to give an account of one’s actions to someone else, often balanced by a responsibility of that other to seek an account” (Scott, 2006, p. 175). These binding obligations are structured and enforced through the adoption of some combination of explicit standards and implicit norms (Kearns, 1996), and a recognition and responsiveness to particular individuals, groups, or organizations (Maas and Radway, 1959; Mashaw, 2006).

Kevin Kearns defines *explicit* standards as being “codified in law, administrative regulations, bureaucratic checks and balances, or contractual obligations to other

organizations” (Kearns, 1996, p. 66). In essence, explicit standards are reified “artifacts” that provide stable parameters used to structure coordinated action. Such standards are often put into writing and appear as contracts, regulations, laws, performance standards, and formal rules, and are explicitly stated within performance measures.

Implicit standards are “ill-defined and, perhaps, shifting notions of what constitutes responsible or appropriate behavior” that “are rooted in professional norms and social values, beliefs, and assumptions about the public interest, the public trust, and how (and to whom) organizational behavior should be explained . . . they can involve powerful sanctions for nonperformance or noncompliance” (Kearns, 1996, pp. 66–67). Implicit standards exist as “theories-in-use” (Argyris and Schon, 1995) that rely on the active participation of actors to create, re-create, enforce, and object to them. Implicit standards may be understood as a weaker accountability tool because they are often predicated on tacit knowledge. Implicit standards may include norms that govern principal-agent relations (Milward and Provan, 1998), democratic values (Sorenson and Torfing, 2005), public value (Stoker, 2005), policy goals (Stone, 2002), and reciprocity and trust (Behn, 2001).

Network accountability structures require that actors be responsive and responsible to particular constituencies who are represented in specific dyadic or triadic relationships. The eight different accountability types constitute a type of tie that exists between individual parts, subnetworks, or whole networks. Those “to whom” accounts are rendered may be external or internal to the networks. In this framework, elected representatives, citizens, courts, supervisors, professionals, collaborators, owners, consumers, or organized labor are placed in the position of judging the performance of the agents that are being held accountable. Those to whom account is rendered (the “accountee”) will inevitably prioritize different combinations of policy goals, performance measures, and other desired procedures and outcomes. Different accountees may prioritize the same values or perceptions of performance differently (Gruber, 1987; Radin, 2006). Figure 9.1 illustrates the relationship between accountee and accouter.

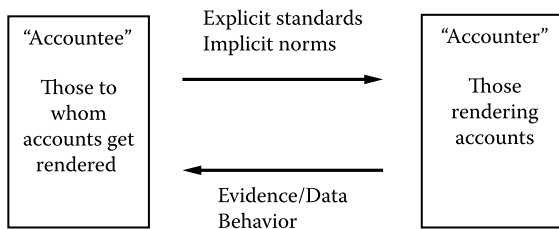


Figure 9.1 The Accountability Dyad.

A Governance Network Accountability Framework

Democratic anchorage is one of the central governance features of governance networks functioning within a context of democratic forms of political and governmental systems. Governance also needs to be considered in light of the network's structure, particularly in relation to the flow of specific stocks of capital, power, and authority. Governance also needs to be understood in the context of the accountability frameworks that persist within each node. The nodal governance of each network actor has the potential to play an important role in the governance of the whole network. Governments and, to a certain extent, interest groups play a role in bringing democratic anchorage to a governance network. The need to show profit may sink or support the development of a capital improvement project through partnership networks. The governance characteristics of participating organizations need to be considered in light of an accountability framework that (1) allows for accountability that can cross sectors (particularly the public and private sectors); (2) draws upon the existence of hierarchical and collaborative ties within and across governance networks; (3) distinguishes between strong and weaker forms of accountability relationships; and (4) recognizes the existence of both explicit and implicit standards and norms. Table 9.3 lays out the governance network accountability framework that we will discuss in some detail.

Barbara Romzek and Mel Dubnick's model of accountability is arguably the most influential framework used to analyze the accountability structures of governmental organizations. Drawing upon a study of the Space Shuttle *Challenger* explosion, they illustrate the four different accountability structures at work within NASA, and government actors in general: political, legal, bureaucratic, and professional (1987). In their 2×2 accountability model, Romzek and Dubnick conjoin four different accountability frames to considerations of external and internal control, and high and low degrees of control. Within the context of interorganizational networks, control may be predicated on an individual network actor's degree of centrality within the network. Romzek and Dubnick also suggest that degrees of control may be understood in terms of strength of ties. Presumably, stronger ties elicit higher levels of control. Within governance networks, the degrees of centrality and the relative strengths of the "controlling" entities are often highly contextual and contingent on the positionality of the organizational actors within the governance network.

The governance network accountability framework presented here hinges on the importance of democratic anchorage; the possibility that market-oriented businesses, corporations, or firms are implicated in and by network activity; and the interplay of both bureaucratic and collaborative ties within the

Table 9.3 Governance Network Accountability Framework

<i>Accountability Frame</i>	<i>Accountability Type</i>	<i>To Whom is Account Rendered?</i>	<i>Strength of Accountability Ties</i>	<i>Explicit Standards</i>	<i>Implicit Norms</i>
Democratic	Elected representative	Elected officials	Strong (weaker when “lame duck”)	Laws; statutes; regulations	Representation of collective interests; policy goals
	Citizen	Citizens	Weak (stronger during elections)	Maximum feasible participation; sunshine laws; deliberative forums	Deliberation; consensus; majority rule
	Legal	Courts	Strong	Laws; statutes; contracts	Precedence; reasonableness; due process; substantive rights
Market	Shareholder/owner	Shareholders/owners	Strong	Profit; performance measures	Efficiency
	Consumer	Consumers	Weak	Consumer law; product performance measures	Affordability; quality; satisfaction
	Labor	Employees; national labor unions	Weak (stronger when jobs are threatened)	Steady employment; wages; collective bargaining	Mutual respect; participatory decision making
Administrative	Bureaucratic	Principals; supervisors; bosses	Strong	Performance measures; administrative procedures; organizational charts	Deference to positional authority; unity of command; span of control
	Professional	Experts; professionals	Weak (stronger when capacity to revoke licenses exists)	Codes of ethics; licensure; performance standards	Professional norms; expertise; competence
	Collaborative	Collaborators; peers; partners	Weak	Written agreements; decision-making procedures; negotiation regimes	Trust; reciprocity; durability of relationships

operationalization of network structures. Two familiar dichotomies posed within the public administration and political science fields are useful here: the “politics-administrative dichotomy” (Goodnow, 2004) and the distinction between democracy and markets (Stone, 2002).

That it takes a combination of political and administrative accountabilities to effectively govern public institutions has been a widely accepted assumption in public administration (Appleby, 2004). However, the division between political and administrative functions in public administration theory is still widely assumed (see Rosenbloom, 2004; Romzek and Dubnick, 1987). Stone draws a distinction between the market and the polis (democracy) as a means for understanding how policy is framed through goals, problems, and solutions (2002). Distinctions between democracy and markets have been interpreted through neoliberal, neocorporate, neoconservative, and critical lenses, all of which may be useful in determining the apparent trade-offs existing between them (Miraftab, 2004; Catlaw, 2009).

A three-pronged theory of accountability for governance networks encompassing democratic, market, and administrative frames is presented. Such a tripartite framework takes into account the existing accountability structures that have been applied to public sector organizations (historically framed in terms of the politics-administrative dichotomy (Goodnow, 2004)) or as trade-offs between political and bureaucratic accountabilities (Romzek and Dubnick, 1987). Our model integrates the role that markets and market forces play within governance networks. It also acknowledges the existence of both vertical ties (classically defined in terms of command and control) and horizontal ties (as discussed within social network and social capital literature).

Discerning the accountability structures amidst the complexity that emerges in cross-sector, cross-jurisdictional settings requires us to consider the dynamics at work when the accountability structures of one network actor commingle, compete, or complement the accountability structures of other network actors. As a result of unpacking these dynamics, we may be able to ascertain the extent to which “hybrid accountability regimes” (Mashaw, 2006, p. 118) emerge within governance networks.

Democratic Frame

Romzek and Dubnick referred to political accountability as responsiveness to the needs and concerns of political constituents and public stakeholders. Under the expectations inherent to political accountability, “public agencies are expected to be responsive to other actors within the political system, particularly to elected politicians aiming to control their activities” (Mulgan, 2000, p. 566). Political accountability structures also rely on public access to governmental decision-making processes directly through open meeting laws, freedom of information

acts, maximum feasible participation requirements, and sunshine laws, or indirectly through representation of elected officials. In essence, political accountability confers the vestiges of “democratic anchorage” onto public bureaucracies. The depth and breadth of the democratic anchorage of a governance network is said to depend on the roles of elected officials and public administrators, the accountability regimes at work within the network, and the extent to which the existence of the network expands the capacity for citizens to access networks and benefit from the outputs and outcomes of network activity (Sorensen and Torfing, 2005). In democratic systems, political accountability may be framed as democratic accountability through which both citizens and the representatives they elect serve as the actors to whom accountability must be rendered. The standards and norms used by citizens and elected officials to hold public bureaucracies accountable may be understood in terms of the laws and regulations passed by elected officials, the rights of citizens to exercise their voice, and the kind of norms often ascribed to deliberations about public policy (Stone, 2002).

We refine Romzek and Dubnick’s sense of political accountability by narrowing in on the critical roles that elected officials and citizens play, recasting political accountability as the democratic frame through which *elected representative accountability* empowers elected representatives to serve as the principal actors in the legislative and executive branches of democratic governments. Although voted into office by citizens, elected representatives become the principals of public bureaucracies through their powers to allocate resources, mandate certain actions, and monitor the day-to-day administration of the executive branch.

Elected officials, however, are subject to pressures put on them from those to whom they feel obliged to render accounts, ranging from their home constituencies, to interest groups, to donors. Writing about the kinds of pressures that interest groups can place on elected officials, Teske observes that, “like vectors in a physics model, the interest group pressure will act on politicians from different directions and with differential force. The groups that are able to ‘push’ regulators harder are more likely to get resultant outcomes that they prefer, though perhaps not exactly congruent with what they want” (2004, p. 38).

Citizens, by contrast, may directly hold public organizations accountable through the more horizontal (and essentially weaker) ties forged through maximum feasible participation regulations, sunshine laws, and deliberative forums. The importance of *citizen accountability* for the democratic frame of governance networks is recognized within the literature pertaining to deliberative democracy (Fung, 2006), participatory governance (Bingham, Nabatchi, and O’Leary, 2005), collaborative governance (Ansell and Gash, 2008; Emerson and Nabatchi, 2015), and, to an extent, nonprofit governance (Kearns, 1994; Koliba, 2013). Nonprofit organizations, as voluntary associations, have been long understood as important mediating institutions through which citizens directly

contribute to a nation's civic culture. Citizen accountability may therefore exist for both governmental and nonprofit actors.

Romzek and Dubnick suggest that a *legal accountability* structure stresses the role that judiciary and quasi-judiciary procedures play in ensuring the execution of sound and reasonable judgments within an organization. Although they differentiate legal from political accountability, we follow Mashaw's (2006) lead in equating legal accountability with a democratic frame of reference. Legal accountability is ensured through laws and other explicit standards, such as due process, substantive rights, and legal agreements found in binding contractual arrangements. Presumably, all types of formal organizations and individuals are held to some measure of legal accountability, often predicated on adherence to the rule of law, constitutional law, civil and criminal laws, and legislative mandates. Legal accountability distinguishes itself through the centrality of the legal system and the roles that judges and juries play as principal actors within it. Also, it is important to note that public managers have been recognized as taking on quasi-judicial roles as well (Rosenbloom, 2004; Bingham, Nabatchi, and O'Leary, 2005). Thus, we may equate legal accountability with more vertically oriented ties, although the use of juries and the complexities of legal precedence do provide for greater opportunities for horizontal ties to manifest themselves through legal accountability frames.

Market Frame

A market frame may be understood by differentiating between capital and production markets (Mashaw, 2006, p. 122). The profit-making obligations of businesses dominate private sector accountability structures (Mulgan, 2000). In the private sector, accountability applies to owners and shareholders who have rights to call the company's managers to account for the company's performance, and then, secondarily, to customers whose main right is to refuse to purchase (Mulgan, 2000, p. 569). Thus, a market frame of accountability may be divided into three distinct, but interrelated components: owner/shareholder accountability, consumer accountability (Scott, 2006), and labor accountability (Mills, Koliba, and Reiss, 2016). It should be noted, however, that this interpretation of corporate accountability structures does not take into consideration that a broader interpretation of stakeholder accountability exists in U.S. constitutional law (Nace, 2005) and more recently within the corporate social responsibility literature (Fox, Ward, and Howard, 2002).

American legal scholars have advanced the "shareholder primacy norm" through which "corporate directors have a fiduciary duty to make decisions that are in the best interests of the shareholders" (Smith, 1998, p. 278). Shareholders or, in the case of privately owned businesses, owners are thought to be motivated by the maximization of profit. *Shareholder accountability* calls for the alignment

of performance measures with profitability. Shareholder accountability requirements push companies to undertake the most efficient set of practices possible in order to maximize profits. Shareholder accountability is mediated through the monitoring of certain parameters that are used to determine the company's profitability. Shareholders and owners exist as principals within the corporate governance structure.

Consumerist accountability is a market-based accountability predicated on the ability of consumers to choose between alternative, competing goods or services. Through a consumer's choice or refusal to purchase, the consumer may be understood as holding a corporation accountable. "The central mechanism of this modality is competition. Thus, a standard is set through the interaction of buyers and sellers, which also forms the basis for monitoring and rewarding compliant behavior through loyalty and for punishing deviant behavior through exit" (Scott, 2006, p. 178). Mulgan observes that "while a customer may hold a private sector provider accountable in the case of a faulty individual purchase or contract, he or she has no general right to demand that the private provider offer services that meet his or her perceived needs. In a competitive market, the main mechanism of responsiveness is consumer choice, the capacity of the consumer to exit to an alternative provider" (2000, p. 569). Thus, the consumer exists in a horizontal arrangement with the corporation. Within the context of governance networks, consumerist accountability may be understood within the new public management edict to treat "citizens as customers" of public goods and services.

Labor accountability encompasses the role that workers, be they formally organized into labor unions or not, play in market frameworks of accountability. The human resources model of administrative behavior is grounded in "the premise that an organization's workers are its most important asset, and should be treated accordingly" (Kearney and Hays, 1994, p. 44). By providing or withholding human resources, workers play a critical role in ensuring that an organization is successful. By undertaking tasks and carrying out a variety of organizational functions, laborers serve as a critical actor within a complex governance accountability framework. Rosenbloom and Shafritz situate labor's role in providing accountability feedback as the circulating of information about the effect or results of the behavior of individual workers or whole labor systems that are communicated back to those individuals or labor systems so that "human behavior or organizational performance might be modified—presumably improved" (Rosenbloom and Shafritz, 1985, p. 252). This kind of feedback generated from an organization's owners or management to labor plays a role in ensuring job satisfaction and negotiated understandings of performance, rendered at both the individual and collective levels. This feedback can be directed in the other direction as well: workers may provide feedback to an organization that may allow for the development of improved working conditions, refined modes of production and service delivery, and assurances of quality control.⁴

Cultures of labor-management and owner conflict have led to the establishment of the first organized labor unions. “With the development of labor unions, workers have secured a more effective voice in arranging the terms and conditions of their employment, and, perhaps more important, have been enabled to participate increasingly in the government of their industrial work” (Cox, 1947, p. 1). The existence of labor unions formalizes a process of “mutual gains bargaining” (Friedman, 1993; Deery and Iverson, 2005) secured through the legally protected right to collectively bargain the terms and conditions of employment.

A cooperative labor relations climate has been found to positively influence levels of organizational commitment and union loyalty, as well as productivity and quality of services (Deery and Iverson, 2005, p. 600). When labor unions are present, the role of labor accountabilities is formalized around potentially conflictual relationships. The right to negotiate a contract, enter into formal grievance processes, and in some cases strike, provides very explicit ways that organized labor can hold market-based organizations, as well as governments that have permitted civil servants to organize, accountable.

Although the existence of formalized accountabilities through labor union activity can give rise to accountability ties premised on conflict, this need not necessarily be the case. Much research has been conducted around the question of whether workers can be loyal to both their unions and to the organizations that employ them. “The likelihood of simultaneous commitment to two interacting systems such as a union and an employing organization appears to grow where the relationship between the systems is cooperative” (Angle and Perry, 1986, p. 44). Thus, the role of labor as a contributor to market-based accountability frameworks is shaped by the persistence of conflictual and/or cooperative relations with owners and management (Mills, Koliba, and Reiss, 2016). In either event, the role of labor as key actors in virtually all organizational settings needs to be recognized.

Although nonprofit organizations are less likely to enter into collective bargaining agreements with labor (Cohen, 2013), the implicit norms of being accountable to nonprofit labor is certainly evident, particularly in the case of smaller nonprofits that depend on their smaller workforce to do more with little resources, calling on their professional expertise to drive accountability. This follows in line with Steven Rathgeb Smith and Michael Lipsky’s early observations (1993) regarding the growing professionalization of the nonprofit workforce. It should also be noted that labor unions are, unto themselves, nonprofit organizations.

Administrative Frame

An administrative frame of governance network accountability may be viewed in terms of hierarchies and flatter collaborative arrangements. The administrative

frame encompasses the implementation of policies and decisions (Chandler and Plano, 1982) and is directed at the relationships between actors who, by virtue of their positional authority within (and across) organizations, interact with each other to achieve some collective ends. The administrative frame focuses on the processes, procedures, and practices that are employed in the administration and management of formally organized social networks. Our chief concern here is distilling administrative relationships down to their basic processes and exploring how accountability may be framed administratively in terms of the dynamics operating between principals and agents, experts and laypersons, collaborators, and other contributors. The administrative frame of network accountability is most very likely governed through the types of behaviors and strategies discussed at length in Chapter 8.

Bureaucratic accountability structures are characterized by hierarchical arrangements through which there are clear relationships between subordinates and superiors who rely on the classical principles ascribed to hierarchical, bureaucratic structures, such as the “unity of command” and “span of control” (Gulick, 2004). These principles may be embodied within the formal operating standards and procedures in place, along with stated rules and regulations. Bureaucratic accountability structures rely on an adherence to intraorganizational rules and procedures and, more informally, principal-agent norms. This form of accountability stresses the importance of authority embodied in vertically arranged relationships within formal organizations. Individual nonprofit organizations may rely on bureaucratic accountability structures, as do hierarchically arranged businesses.

It is important to note that bureaucratic accountability appears in contractual arrangements that infer a principal status to one partner. Reporting and monitoring practices, adherence to standards around goals, and service delivery and performance may all be mechanisms used to convey bureaucratic accountability. The same can be said for specific top-down, government driven regulations and laws, where noncompliance can be sanctioned to bureaucratic means (e.g., penal and civil litigation systems).

Within the context of Romzek and Dubnick’s accountability framework, *professional accountability* structures rely on the skills and expertise of professionals to inform sound judgments and discretion (1987). They assert that “professional accountability is characterized by placement of control over organizational activities in the hands of the employee with the expertise or special skills to get the job done” (p. 187). Professional accountability may also be maintained through compliance with profession or industry best practices, rules, or codes of ethics. The relationship between public administration and professionalism is another enduring theme within the literature (Mosher, 1982). Professional practice has been equated with ethical behavior, competence, discretion, and responsiveness. Professional accountability is manifested through networked

relationships between other professionals and the means by which they associate with one another. Such associations usually take place through interpersonal networks that transcend organizational boundaries. Professional accountability may be understood in terms of the horizontal ties that exist between social networks of professionals who voluntarily associate with each other (Mashaw, 2006). It has also been framed as a matter of vertically oriented relationships that exist between experts and laypersons (Romzek and Dubnick, 1987), even in some instances taking on principal-agent type relations (when professional expert opinion most often drives agent behavior—as is the case with health care delivery).

Historical social networks, and to a lesser but still important extent governance networks, have been predicated on the relative strength or weakness of voluntary ties (Weick, 1976). When two actors enter into a horizontal relationship they are not beholden to the traditional principal-agent dynamics of vertically arranged relationships. Instead, social network theorists have equated horizontal relationships with cooperative behaviors, and norms of trust and reciprocity. The *collaborative accountability* that binds actors as peers or partners exists at the interpersonal level during the course of daily interactions with others (Mashaw, 2006). It should be noted that even within the most hierarchically arranged organizations workers interact with each other as peers or partners organized around collective endeavors, a fact that is particularly documented within the literature on teamwork and small group behavior (Mintzberg, 1979; Langfred

CHALLENGES ASSOCIATED WITH HOLDING COLLABORATORS ACCOUNTABLE

- Reasonable people may disagree about which results to measure, and appropriate data can be difficult to track.
- Some collaborators may resist being held accountable for results, fearing they will not perform well—either because they doubt their own capacity, or because circumstances beyond their control may influence results they are asked to achieve.
- Measuring particular results may focus implementation efforts so narrowly that desirable policy goals that are harder to measure are displaced (teaching to the test).
- A “complete mental reorientation” on the part of public managers, their authorizers and stakeholders, their staff and collaborators, and citizens themselves is needed (Behn, 2001).

Source: Adapted from Page (2004).
Public Administration Review, 64, 591–592.

and Shanley, 2001) and discussions of clan governance (Ouchi, 1980; Rodriguez et al., 2007). Collaborative accountability is best understood within the context of social capital, and the normative foundations that give shape to social networks.

The application of game theory to the study of cooperative behavior reveals that “the foundation of cooperation is not really trust, but the durability of the relationship.” Durability is built up over time through what Axelrod views as a “trial-and-error learning about possibilities for mutual rewards” and imitation of past successful relationships (1980, p. 182). Durability also requires network actors to not tolerate deviant behaviors. Axelrod’s study of the iterated prisoner’s dilemma underscores the need for networked actors to challenge such behaviors in an effort to bring about cooperative behaviors (1980, p. 184). Thus, the “reputational capital” of network actors becomes a key element within the establishment of durable, horizontally aligned relationships (Kreps and Wilson, 1982). Reputation becomes an important element in the bargaining, negotiating, and mutual adjustment activities undertaken in networked relationships (Morris, Morris, and Jones, 2007, p. 95).

Overlapping Accountability Frames

Empirical observations of governance networks using the governance network accountability framework presented here have demonstrated how a combination of some or all of the accountability types identified above have formed to create the “accountability regime” of the network. In some cases, these accountability regimes failed to ensure network performance, particularly in times of crisis. In other instances, these accountability regimes were robust and successfully supported effective service delivery, project completion, or policy prescription.

A governance network’s accountability regime is structured by the sectoral characteristics of its nodes, with state actors bringing with them the democratic anchorage to representatives and citizens, and the private sector actors bringing a market frame of owners and consumers. These regimes are also structured as a complex array of vertically and horizontally aligned relationships, some of which persist through the operational characteristics of bureaucracies and collaboratively arranged social networks.

Obviously, there are substantive challenges to defining the hybridized accountability regimes of governance networks as the aggregate of discrete accountability types. Accountabilities combine, commingle, and compete with each other, often forming the basis of trade-offs. Where trade-offs are evident, confusion over which accountability type trumps others is bound to persist, a point that was first articulated by Romzek and Dubnick (1987).

Koliba, Mills, and Zia (2011) (see Application L at the end of this chapter) have applied the governance network accountability framework presented above

to the case of the response and recovery efforts following landfall of Hurricane Katrina upon the Gulf Coast in August 2005. They discuss the accountability couplings and trade-offs arising within some of the “several overlapping networks for disaster management . . . in place in southeastern Louisiana, largely in response to federal stimuli” (Kiefer and Montjoy, 2006, p. 125). They cite how the lack of certain couplings and trade-offs, particularly between the Federal Emergency Management Agency (FEMA) and the Red Cross, led to some of the policy implementation failures evident in the studies that have been conducted.

Mills and Koliba (2014) (see Application M at the end of this chapter) examined the nature of accountability and its associated trade-offs in regulatory governance networks prior to the Deepwater Horizon/BP oil spill in the Gulf of Mexico in 2010. The results of the analysis indicate that the lack of a fully implemented process-oriented regulatory regime, the lack of professional expertise at Minerals Management Service (MMS) to fully operate a process-oriented regime, and an overreliance on shareholder accountability rather than professional accountability structures in the decision-making processes by BP, Transocean, and Halliburton were contributing causes of the Deepwater Horizon disaster. The findings support the conclusions of Gormley (1986) who noted that as processes become increasingly complex, agencies often defer to the professional expertise of industry while decision-making processes become similar to those undertaken within “board-rooms,” often without the necessary expertise to manage process-oriented regimes.

Finally, Mills, Koliba, and Reiss (2016) (see Application N at the end of this chapter) apply the governance network accountability framework to the regulation of aviation safety in the United States. The study finds that in order to have effective process-based regulation, regulators and elected officials must design regimes that balance multiple accountability regimes to prevent actors from relying solely on their preferred accountability mechanisms. Put differently, if regulators rely only on the voluntary disclosure of incidents by firms without the threat of other accountability mechanisms such as fines or revoking of an operating certificate (i.e., good cop/bad cop enforcement strategies) then firms will often rely on the most familiar and arguably important accountability mechanism to them: shareholder accountability. Additionally, balancing accountability regimes is easier to achieve for regulators when a third party, in this case, employee unions, is given authority to assist in the facilitation of process-oriented regulatory programs. This suggests that a diversity of interests in the facilitation of process-oriented regulatory programs helps prevent actors from relying too heavily on one particular accountability mechanism. Finally, the presence of employee unions in one voluntary program operated by the Federal Aviation Administration (FAA) helps prevent industry from engaging in large-scale regulatory deception while also helping prevent regulators from using self-disclosed data in punitive actions against employees and air carriers.

Implications of Sector Blurring

The model of governance network accountability presented here takes into consideration the accountabilities that encompass different social sectors. We have described democratic accountabilities as being anchored within the preexisting accountability structures of democratic governments and, to a certain extent, the capacity of nonprofit organizations, as contributors to civil society, to represent, advocate for, and act on behalf of certain collective interests and constituencies. We have integrated private sector accountability structures into the model through the introduction of market accountabilities. Lastly, we recognized the administrative accountability structures that exist across all forms of social organization. When and where accountability structures overlap we recognize instances where accountability structures complement or even combine with each other. One implication of the coupling of accountability structures between different network actors within governance networks is the possibility of the blurring of accountability boundaries and borders, resulting in instances of “sector blurring.” Sector blurring may result in any number of possibilities. Figure 9.2 suggests the range of possibilities that may result when sectors blur.

Nonprofit-Government Sector Blurring

Writing about the implications of government’s increasing influence over nonprofit organizations within grant and contract agreements, Steve Smith and Michael Lipsky have identified the impacts that the receipt of government funding bears upon nonprofit organizations. They discuss how government

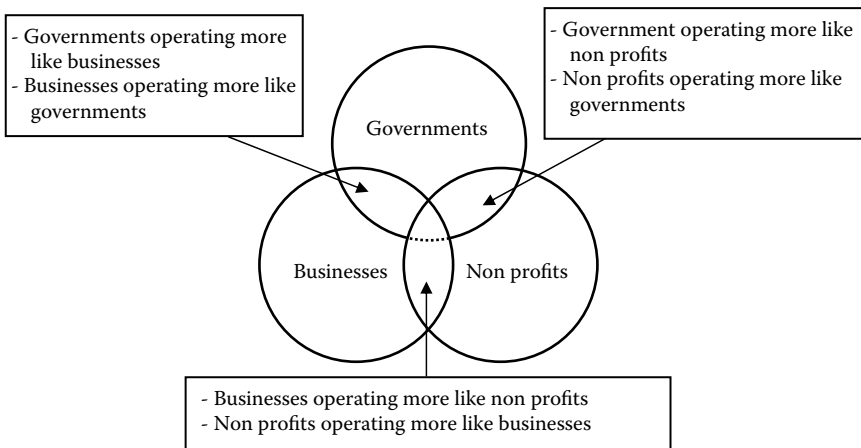


Figure 9.2 Overlapping Sectors.

funding changes the scale of the nonprofit organization and increases administrative demands to remain in compliance (1993), an observation echoed later by Phillip Cooper (2003). The pursuit or maintenance of government grants and contracts leads to a deeper involvement of nonprofits in regulation writing, the legislative process, and government budgeting cycles. It has been demonstrated that public funding of nonprofit organizations “substantially increases the likelihood that nonprofits will engage in participatory governance practices” (LeRoux, 2009, p. 513). Smith and Lipsky were also among the first to recognize that such involvement has increasingly “professionalized” the management of nonprofit organizations (1993, p. 90). Richard Couto and Christine Guthrie have recognized that “this development implies a shift of norms from those of the local community to those of the government agency providing funds” (1999, p. 63).

We can view the impacts of this particular form of sector blurring as a matter of commingled accountability types. The bureaucratic accountability structures of government funders are imported into the nonprofit agents. Cooper notes that “the same political abilities that allow NGOs to be supportive also allow them to resist change and to fend off accountability efforts” (Cooper, 2003, p. 66). The commingling of these accountability regimes results not only in certain transaction costs, as many have noted (Kelman, 2002; Cooper, 2003), and greater professionalization. As the accountability of the public and nonprofit sectors blur, the representative interests of nonprofit organizations attempt, sometimes with great success, to influence regulation writing, the legislative process, and the government budgeting cycle. As nonprofits interface with governments in this way, through either their development of grant and contract agreements, their involvement within interest group coalitions, or active engagement in public-private partnerships, they impact the accountability regimes of the government actors in their governance networks. As civil society organizations, nonprofit organizations vie to have their interests integrated into the democratic accountability structures of governments.

Couto and Guthrie discuss the mediating roles that nonprofit organizations may follow to reach their democratic potential. Nonprofits serve as civil society “mediating organizations” when they “produce, directly or through advocacy of social and political provision, new forms and larger amounts of social capital, including the economic base of human community; when they provide their members representation and participation in the socio-political organizations of neighborhood, community, state, and nation; and when they expand their members’ sense of common bonds with others and thus increase trust, cooperation, and collaboration” (Couto and Guthrie, 1999, p. 68). Thus, nonprofit organizations that are based upon premises of voluntary association bring a measure of democratic accountability to a governance network through the social capital they bring/provide. The relationship of social capital to the

promulgation of civil society and, most particularly, the levels of engagement of ordinary citizens has been laid out by Robert Putnam (1993, 2000). Nonprofit organizations will likely be critical actors in the kind of participatory governance strategies highlighted in Chapter 8.

Nonprofit-Corporation Sector Blurring

Turning to the blurring of lines between nonprofits and private corporations, the very legitimacy of nonprofit organizations is said to be threatened when they partner with corporations. Herlin (2013) finds that the solution to this problem is to develop project-based partnerships rather than enter into fuller integration of functions (pp. 22–23). Especially risky to the perceived legitimacy of nonprofit organizations is the decision to engage in brand licensing, e.g., corporate branding on organizational materials; likewise, a corporate partner's use of the nonprofit's brand is especially damaging to perceived legitimacy (p. 24). Hybridized nonprofit/for-profit organizations are beginning to be formed, sometimes referred to as B Corporations, L3Cs, and Benefit Corporations, that blend profit-making with social entrepreneurship. Much more remains to be understood about the influence of businesses over nonprofits.

Corporation-Government Sector Blurring

The blurring of corporate and government accountability structures is evident in the longstanding discussions within public administration regarding the comparison of business and government administrative practices. We can see instances of sector alignment in the efficiencies that were to be found within scientific management and later evolving into government reforms built around the goal of making governments run more like businesses. Critics of the new public management paradigm have made compelling arguments concerning the efficacy of treating citizens as customers (Denhardt and Denhardt, 2003), letting market forces dictate public investments of resources, and efficiency being the primary or only rationale for making decisions. These arguments may be interpreted through our accountability framework as trade-offs between citizen and customer accountability, trade-offs between democratic and market accountabilities more broadly, and the coupling of market and administrative accountabilities.

Regulatory capture that arises within certain regulatory subsystems can be understood in terms of accountability trade-offs and couplings. When special interests or private businesses try to become those critical actors with whom elected representatives decide to form allegiances, they will likely modify either the explicit or tacit accountability structures of government actors to varying degrees of success. When the coupling of these accountability structures does

occur, private interests are vested into the accountability structures of public sector actors who also still have constitutional obligations to be accountable to a citizenry and their freely elected representatives. We posed the challenges associated with this kind of sector blurring as a matter of deepened democratic anchorage or the withering capacity of a hollowed-out state in Chapter 1.

With this concern in mind, we may look toward the implications that sector blurring bears on the accountability structures of private sector actors. We may examine these impacts in terms of two visible considerations. The first is the recent interest in nationalization, and the longstanding interest in the regulation, of business, industry, and aspects of the market economy. The second concerns the capacity of the corporate social responsibility movement and other attempts at socially responsible business practices to modify the accountability structures of private actors in word as well as deed.

Contemplating what the lasting effect of the financial crisis of 2008 will have on the relationship between the public and private sectors, Donald Kettl suggests that the crisis is of such large proportions that it has led to a new social contract between governments and businesses. This contract is guided by three factors: more public money in the private economy, more rules to shape how the private sector behaves, and more citizen expectations that government will manage the risks we face (2009). Kettl then goes on to suggest that the problem with this new contract is that “we’re making it up as we go along, and we’re not sure where we’re going.”

Jonathan Koppell’s analysis of hybrid organizations (2003) sheds a great deal of light on the relationship between accountability and sector blurring. According to Koppell, quasi-governmental or hybridized organizations “allow government to harness the power of markets. They are capable of steering private, profit-seeking organizations into arenas improved by their presence” (Koppell, 2003, p. 185). Hybrid organizations are initiated by governments to address specific public policy purposes. They are “owned in whole or part by private individuals or corporations and/or generate revenue to cover [their] operating costs” (p. 12). Jim Perry and Hal Rainey distinguish between types of hybrid organizations: government corporations, government-sponsored enterprises, regulated enterprises, governmental enterprises, and state-owned enterprises (1988). In the United States, these hybridized organizations include Fannie Mae and Freddie Mae in the housing and mortgage arenas, Amtrak in the transportation arena, regulated telecommunication and utility industries, and regional port authorities. Hybridized organizations are also developed to serve multiple nations with global jurisdictions. Koppell discusses how international entities such as the World Bank and the International Monetary Fund have been devised to maintain international markets and monetary flows between the developed and developing worlds (2003, p. 7). Koppell’s analysis of hybridized organizations provides an extensive examination of the role that governmental regulators play in providing

oversight over these profit-seeking enterprises. These hybridized organizations all operate within regulatory subsystems.

Although Perry and Rainey add government contractors to their list of quasi-governmental organizations, Koppell suggests that government contractors differ from hybridized organizations because “(a) the contracting agency typically bears responsibility for delivery of some service or good by contractors; (b) as a consequence, expectations for accountability and public control do not apply” (2003, p. 12). It should be noted that in addition to Perry and Rainey, Kettl (1993) and Bozeman (1987) both claim that contractors and hybridized organizations are indistinguishable. The extent to which the democratic accountability structures of governments extend to government contractors becomes a critical consideration here. The more that democratic accountabilities extend to private contractors, as well as the kind of quasi-governmental entities listed above, the more sectors blur and the more that private firms behave like governments. The uniting factor that arguably exists in all forms of hybridized organizations, including government contractors, is the simultaneous pursuit of programmatic objectives aligned with the pursuit of public goals and profitability (Koppell, 2003, p. 104).

Another avenue through which private firms will take on the accountability characteristics of public sector entities is through the advancement of corporate social responsibility (CSR).⁵ The contemporary corporate social responsibility movement is premised upon the voluntary (and essentially normative) efforts of corporations to achieve public goals (Davis, 1976). This movement emerged in the latter half of the twentieth century, marking a departure from the deference that was given to competitive market regulation in the early twentieth century (Hay and Gray, 1974). Two key developments in the 1930s opened the door for a corporate social responsibility framework: “the increasing diffusion of shares of American corporations and the development of a pluralistic society” (Hay and Gray, 1974, p. 136). Owing to these developments, two central groups entered the accountability structures of private firm shareholders and labor unions (Hay and Gray, 1974).

In the 1960s and 1970s, the civil rights movement brought elevated concerns of ethical business practices into the mainstream social consciousness (Lantos, 2001). During this period, the literature was mainly concerned with defining CSR (see Davis, 1960; Heald, 1970). Keith Davis (1976), a prominent early scholar on CSR, wrote: “Social responsibility implies that business decision makers recognize some obligation to protect and improve the welfare of society as a whole” (p. 14). Davis believed that there was an incongruence between the beliefs of general society and the actions taken by business. The “economic abundance” no longer outweighed concerns for a “declining social and physical environment” (Hay and Gray, 1974, p. 137). In 1971, the Committee for Economic Development (CED) published *Social Responsibilities of Business*

Corporations and noted that businesses were taking on broader responsibilities for meeting public interests. The CED was comprised of members of the academic and business communities, demonstrating that both recognized the emergence of CSR as a viable movement shaping corporate behavior (Carroll, 1999).

There are multiple interpretations of what constitutes CSR. Generally, it is viewed as a corporation's effort to respond to issues relating to the environment, labor practices, and human rights (GAO, 2006). CSR concerns are defined by the General Accounting Office (GAO, 2006, pp. 9–10) as:

- *Business ethics*—business actions addressing the CSR concern of business ethics involve values such as fairness, honesty, trust and compliance, internal rules and legal requirements.
- *Corporate governance*—business actions addressing the CSR concern of corporate governance involve the broad range of policies and practices that boards of directors use to manage themselves and fulfill their responsibilities to investors and other stakeholders.
- *Community development*—business actions addressing the CSR concern of community development involve business policies and practices intended to benefit the business and the community economically, particularly for low-income and underserved communities.
- *Environmental protection*—business actions addressing the CSR concern of the environment involve company policies and procedures to ensure the environmental soundness of its operations, products, and facilities.
- *Preservation of human rights*—business actions addressing the CSR concern of human rights involve assuring basic standards of treatment to all people, regardless of nationality, gender, race, economic status, or religion.
- *Workplace equity*—business actions addressing CSR workplace concerns generally involve human resource policies that directly impact employees, such as compensation and benefits, career development, and health and wellness issues.
- *Marketplace*—business actions addressing CSR marketplace concerns involve business relationships with their customers and issues such as product manufacturing and integrity; product disclosures and labeling; and marketing, advertising, and distribution practices.

Much more could be written regarding the composition of these concerns, their origins and assumptions, and the ways in which they are shaped and informed by policy discussions. Space precludes such an examination. However, all of these issue areas can be understood within the context of the pluralistic view of corporate behavior. All encompass a perspective that adopts a broader view of “to whom” the corporation is accountable. Community development

issues are, by definition, concerns for many interests and stakeholders. Environmental issues, by necessity, require a broadened view of interests and stakeholders. Valuing the quality of life for those beyond immediate communities can be understood as an expression of concern for human rights issues. The focus of CSR concerns on the quality of the workplace suggests that stakeholder interests extend internally to workers as well, suggesting to us the possibility for integrating workers' rights into the market accountability framework introduced here.

The World Bank has defined corporate social responsibility as "the commitment of business to contribute to sustainable economic development—working with employees, their families, the local community and society at large to improve the quality of life in ways that are both good for business and good for development" (Fox, Ward, and Howard, 2002, p. 1). This definition does not exclude a corporation's ability to earn a profit; however, it does provide for other considerations, including accounting for a firm's environmental impacts, community impacts, and quality of employee relations.

Davis (1973) wrote that CSR refers to "the firm's considerations, and response to, issues beyond the narrow economic, technical, and legal requirements of the firm" (p. 312). He goes on to say:

A firm is not being socially responsible if it merely complies with the minimum requirements of the law, because this is what any good citizen would do. A profit maximizing firm under the rules of classical economics would do as much. Social responsibility goes one step further. It is a firm's acceptance of a social obligation beyond the requirements of law.

(1973, p. 313)

Within this definition, the socially responsible corporation must go "beyond compliance." Arguably, the motivation to move beyond compliance is grounded in the corporation's value base, or its normative foundation. Good faith negotiation; the meaningful contribution and provision of the private sector entity's capital resources (financial, human, physical, political, social, cultural, and knowledge in nature); attempts to mobilize resources for purposes that lie beyond the pursuit of their own narrow interests; and efforts to facilitate and broker solutions to pressing public problems may all be indicators of shared accountabilities between the owners of private capital and the publics that they may be said to serve.

The voluntary nature of CSR is subscribed to by many of the leading research and advocacy groups supporting the CSR movement. Organizations such as the Business for Social Responsibility, the Center for Corporate Citizenship at Boston College, and Harvard's Kennedy School for Government's Corporate

Social Responsibility Initiative all promote voluntary action on the part of the corporation. These groups support networks of more local and regional associations designed to support a business's voluntary pursuit of CSR objectives. Rather than waiting to react to the regulatory system to initiate socially responsible mandates, corporations are encouraged to preemptively act in responsible ways. Hence, corporations can prevent regulations from occurring with their own voluntary actions (Davis, 1973).

Although we have noted this possibility in our ongoing consideration of regulatory capture, we open the door, at least, for the consideration of those instances when business interests and accountability structures align with the democratic accountabilities that anchor governments and many nonprofit organizations.

Hybridization of Accountability Regimes

The resultant “hybridized accountability regimes” (Mashaw, 2006) that contributed to sector blurring are leading to new forms of “quasi governmental” (Koppell, 2003) and quasi nonprofit (Smith, 2007) organizational structures. Revisiting Romzek and Dubnick’s analysis of NASA following the Space Shuttle *Challenger* tragedy, we find instances in which more than one accountability structure was in play. They premised the accountability failures in this case as a series of trade-offs between the political, bureaucratic, and professional accountability structures in play. Koliba, Mills, and Zia’s (2011) study of some of the failures in the response and recovery efforts following Hurricane Katrina reveals the lack of articulation of new accountability regimes in place during times of emergency, and the resultant conflicts over which accountability regimes were at work in the emergency management governance networks implicated in the Gulf Coast response and recovery efforts.

Conflicts over who is accountable by whom are bound to prevail within governance networks. By introducing a theoretical framework to describe and ultimately evaluate how accounts are rendered within complex governance networks, we hope to provide practitioners with options for designing network accountability systems. If design or redesign is difficult, we hope to, at least, provide practitioners with a way of describing the trade-offs that arise when accountability structures compete, as well as comprehend the consequences when accountability structures are imported and exported across organizational, group, and individual boundaries and borders. The capacity of a governance network to negotiate such border crossings and boundary blurring can be tangibly reified in the performance management systems at work within a governance network, a subject that we turn to in the next chapter.

Applications

In the section to follow, several Applications are provided that focus on network accountability. Application L applies the governance network accountability framework presented in this chapter to the failed response and recovery efforts following the landfall of Hurricane Katrina in the Gulf Coast in 2005. Application M looks at accountability failures that resulted in the BP oil spill, affecting the Gulf Coast in 2010. Network accountability was evaluated for airline safety processes in Application N, while the concept of democratic anchorage is applied to the tribal governance network in Pakistan in Application O. These empirical studies of governance networks demonstrate how network accountabilities are implicated in systems that have failed or are in danger of failing.

APPLICATION L: ACCOUNTABILITY FAILURES IN THE EMERGENCY MANAGEMENT NETWORKS FOLLOWING HURRICANE KATRINA

Koliba, C., Mills, R., and Zia, A. (2011). Accountability in governance networks: Implications drawn from studies of response and recovery efforts following Hurricane Katrina. *Public Administration Review*, 71(2), 210–220.

Abstract

What is the most effective framework for analyzing complex accountability challenges within governing networks? Recognizing the multiscale and intersector (public, private, and nonprofit) characteristics of these networks, an accountability model is advanced organized around democratic (elected representatives, citizens, and the legal system), market (owners and consumers), as well as administrative (bureaucratic, professional, and collaborative) relationships. This concept draws from 2005 events following Hurricane Katrina. Multiple failures of governing networks to plan for and respond to Katrina include a breakdown in democratic, market, and administrative accountability as well as a pervasive confusion over trade-offs between accountability types emerging from crises. This essay offers several useful recommendations for emergency management planners as well as for those who teach and research.

Methods

Source document analysis

The role of governance networks during response and recovery from natural disasters has received a great deal of attention in the literature (Comfort, 2007; Kapucu, 2006a, 2006b, 2012). A 2007 study undertaken by Louise Comfort drew on newspaper accounts of the response and recovery efforts following Hurricane Katrina to determine the jurisdictional distribution of network actors. Table L.1, below, shows how federal, state, county, and city level agencies and offices were the most prominent responders—suggesting a strong intergovernmental network response.

Historically, studies of accountability have focused on epic failures—such as Romzek and Dubnick’s study of the Space Shuttle *Challenger* explosion. Using this approach to the failed response and recovery efforts following Hurricane Katrina, Koliba, Mills, and Zia (2011) apply the governance network accountability regime framework to this disaster using source document analysis undertaken by Dwight Ink and the Government Accountability Office (GAO). Ink’s conclusions regarding the causes of the failed response are found in Figure L.1, below.

The implications for network responses are found within virtually every one of these findings. Drawing on a 2006 report from the GAO, the failure of the Federal Emergency Management Agency (FEMA) to coordinate responses with the Red Cross were identified. Figure L.2, below, illustrates how network ties can be pulled from such after incident reporting.

Walking through the accountability framework laid out in Chapter 9, Koliba, Mills, and Zia (2011) tie in Ink and the GAO’s findings. This analysis demonstrates how catastrophic failure across virtually all forms of accountability ties led to the disaster.

Some key findings and advances stemming from this study include:

- This study examines the roles of governance networks in emergency response and recovery following natural disasters (see Table L.1) and their apparent failures (see Figure L.1).
- It introduces a framework to analyze the complexity of accountability in governance networks and applies a governance network accountability framework to the response following the landfall of Hurricane Katrina in 2005.
- The failings of the intergovernmental networks to successfully coordinate response and recovery activities are outlined, most specifically the coordination failures between the Federal Emergency Management Agency (FEMA) and the Red Cross (see Figure L.2).
- It makes several actionable recommendations to improve responses to crises given the complexity of accountability in governance networks.

Table L.1 Frequency Distribution of Organizational Response System by Sector and Distribution, Hurricane Katrina, August 26–September 19, 2005

	<i>Public</i>		<i>Nonprofit</i>		<i>Private</i>		<i>Special Interest</i>		<i>All Organizations</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
International	11	2.1	3	0.6	6	1.1	0	0.0	20	3.7
Federal/National	69	12.9	23	4.3	75	14.0	1	0.2	168	31.4
Regional	1	0.2	7	1.3	25	4.7	0	0.0	33	6.2
State	78	14.6	7	1.3	4	0.7	2	0.4	91	17.0
Subregional	11	2.1	12	2.2	10	1.9	0	0.0	33	6.2
Parish/County	69	12.9	3	0.6	1	0.2	0	0.0	73	13.6
City	66	12.3	29	5.4	22	4.1	0	0.0	117	21.9
Total	305	57.0	84	15.7	143	26.7	3	0.6	535	100.0

Source: Adapted from Comfort, 2007, who extracted from the *Times-Picayune* (New Orleans), August 26–September 19, 2005.

- Lack of coordination between organizations across all layers and sectors;
- Communication failures in faulty equipment, poor system designs, untrained operators, unmet budget requests, lack of planning, poor management;
- Information gaps across departments and between jurisdictions;
- Inadequate training, particularly joint training between groups;
- Delays in medical care due to “deployment confusion, uncertainty about mission assignments, and red tape. . .”;
- Underutilization of the private sector especially with respect to evacuation needs;
- Lack of emergency and temporary shelter;
- Failure of initiative “at all levels [of government] to take a proactive approach to the crisis” (Ink, 2006, 801–802).

Figure L.1 Summary Findings of Congressional Inquiry into Response Failures Following Landfall of Hurricane Katrina.

(Adapted from Ink, 2006, 801–802). These findings outline the range of failures in the response and recovery networks following Hurricane Katrina.

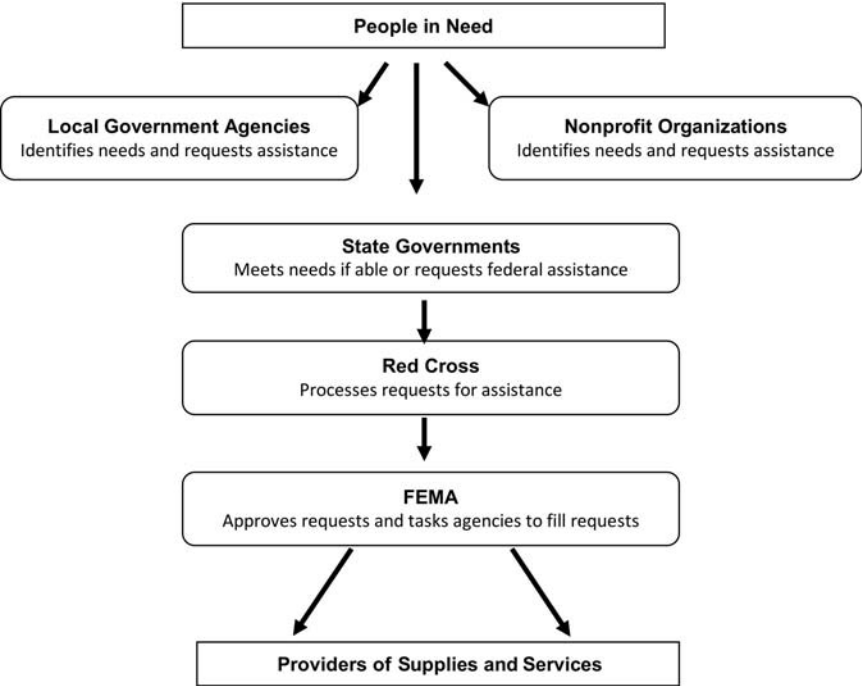


Figure L.2 Flow of Request for Supplies, Equipment, and Services.

This concept map shows the order for processing of requests for supplies, equipment and services channeled through FEMA. After following incident analysis, major changes were made to the request processing functions of these mobilization networks. *Source:* Used with permission: Koliba, C., Mills, R., and Zia, A. (2011). Accountability in governance networks: Implications drawn from studies of response and recovery efforts following Hurricane Katrina. *Public Administration Review*, 71(2), 210–220. Original figure adapted from GAO, 2006.

Table L.2, below, lays out the type of accountability failures found in this case. It demonstrates a way that the governance network accountability framework outlined in Chapter 9 is employed in this specific case. Table adapted from Koliba, C., Mills, R., and Zia, A. (2011). Accountability in governance networks: Implications drawn from studies of response and recovery efforts following Hurricane Katrina. *Public Administration Review*, 71(2), 210–220.

Table L.2 Accountability Failures within Hurricane Katrina Response and Recovery Governance Networks

Type	Performance Failures	
Type	Overall Response and Recovery Efforts (Ink, 2006)	Specific to Processing Requests for Assistance (GAO, 2006)
Political	Lack of coordination Failure of initiative	Failure to fulfill requests for assistance Failure of elected officials to pressure for timely reforms of processing system
Legal	Lack of coordination	Failure to have pre-determined contractual arrangements with providers of emergency goods and services
Bureaucratic	Lack of coordination Information gaps Communication failure Slow delivery of goods and services Lack of clarity about roles and authority Failure of initiative	Failure to clarify roles and responsibilities Failure to have processes in place to process requests Rotation of Red Cross volunteers Failure to have pre-determined contractual arrangements with providers of emergency goods and services
Professional	Lack of expertise in DHS, FEMA Inadequate training Failure of initiative	Rotation of Red Cross volunteers
Shareholder	Lack of resources (just-in-time) Profiteering	Failure to have pre-determined contractual arrangements with providers of emergency goods and services
Consumer	People stranded in squalor conditions; homeless with little means for expressing voice Information gaps	Failure to fulfill requests for assistance
Lateral	Lack of coordination Communication failure Information gaps Failure of initiative	Failure to clarify roles and responsibilities Rotation of Red Cross volunteers Failure to involve Red Cross officials in important policy meetings.

APPLICATION M: ACCOUNTABILITY FAILURE CAUSES FOR THE DEEPWATER HORIZON OIL SPILL

Mills, R., and Koliba, C. (2014). The challenge of accountability in complex regulatory networks: The case of the Deepwater Horizon oil spill. *Regulation & Governance*. DOI:10.1111/rego.12062

Abstract

A puzzle that faces public administrators within regulatory governance networks is how to balance the need for democratic accountability while increasingly facing demands from elected officials to optimize oversight of industry by utilizing the expertise of the private sector in developing risk-based standards for compliance. The shift from traditional command and control oversight to process-oriented regulatory regimes has been most pronounced in highly complex industries, such as aviation and deep-water oil drilling, where the intricate and technical nature of operations necessitates risk-based regulatory networks based largely on voluntary compliance with mutually agreed upon standards. The question addressed in this paper is how the shift to process-oriented regimes affects the trade-offs between democratic, market, and administrative accountability frames, and what factors determine the dominant accountability frame within the network. Using post-incident document analysis, this paper provides a case study of regulatory oversight of the deepwater oil drilling industry prior to the explosion of the Deepwater Horizon rig in the Gulf of Mexico, to explore how the shift to a more networked risk-based regulatory regime affects the trade-offs and dominant accountability frames within the network. The results of this study indicate that a reliance on market-based accountability mechanisms, along with the lack of a fully implemented process-oriented regulatory regime, led to the largest oil spill in U.S. history.

Methods

Source document analysis; critical event analysis

Governance networks are in place to ensure that the health and safety of social and ecological systems are assured. Through expansive pieces of legislation such as the U.S. Clean Air and Clean Water Acts, to the regulation and inspection of complicated infrastructure, government agencies can provide principal oversight over critical physical infrastructures. When this oversight role fails, and industry actors seek to maximize profit at all social and environmental costs, human induced disasters strike.

Mills and Koliba (2014) apply the governance network accountability framework introduced in Chapter 9 to one of the largest human induced environmental disasters in modern history, what has become known as the Deepwater Horizon oil spill in the Gulf of Mexico, off of the coast of the United States. The study uses source document analysis to piece together the critical accountability failures that led to the disaster. Offshore oil drilling is often undertaken through a network of private firms, with each playing different roles. In the context of this disaster, the oil rig itself, the Deepwater Horizon, was owned by Transocean. British Petroleum (BP) leased the rig and negotiated the rights to extract oil deep under the floor of the Gulf of Mexico. Haliburton delivered concrete to the drilling operation, a key part of the extraction process. Mills and Koliba isolate and evaluate the key decisions that were made that, essentially, created the “perfect storm” in this case. Table M.1, below, outlines the nature of the decision, the extent to which a less risky option was available, the time saved by making the riskier decision, and who, in the end, bore the responsibility for the decision. From Table M.1, it is quite clear that the BP Onshore operations bore the brunt of the responsibility for poor decision making, although both Haliburton and Transocean were implicated in certain cases.

The network accountability failures found in this case included a clear trade-off between market and democratic accountabilities. The drive for profit (to please shareholders) outweighed the need to pursue less risky approaches. Administratively, the dominance of BP Onshore to keep pressing for a more aggressive production timeline demonstrated a breakdown in professional accountability (e.g., extending the bounds of viable engineering risk). Mills and Koliba also explore the accountability failures stemming from a steady decline in the capacity of the Federal Bureau of Mines to conduct unreported inspections of oil extraction facilities. In this instance, the bureaucratic accountability of being in compliance with federal regulatory standards, as well as the failure of elected officials to roll back regulatory standards and underfund agency capacity to enforce existing standards, all played a role in this disaster.

Some key findings and advances stemming from this study include:

- This study applies the governance network accountability framework to the regulatory failures before the Deepwater Horizon rig explosion in the Gulf of Mexico.

Table M.1 Evaluating Decision Making aboard the Deepwater Horizon

<i>Decision</i>	<i>Final Decision Maker(s)</i>	<i>Less Time than Alternative?</i>	<i>Less Risky Alternative Available?</i>
Not waiting for foam stability test results for redesigning slurry	Halliburton and BP Onshore	Saved time	Yes
Not waiting for more centralizers of preferred design	BP Onshore	Saved time	Yes
Displacing mud from riser before setting cement	BP Onshore	Unclear	Yes
Using spacer made from combined lost circulation materials to avoid disposal issues	BP Onshore	Saved time	Yes
Not installing additional physical barriers during temporary abandonment procedures	BP Onshore	Saved time	Yes
Not performing additional diagnostics in light of troubling negative pressure test results	BP and Transocean on rig	Saved time	Yes

This table outlines the major decision points during which critical missteps were made in this case. These decisions were largely made by BP Onshore decision makers in an effort to save time to meet a production cycle. Adapted from Mills, R., and Koliba, C. (2015). The challenge of accountability in complex regulatory networks: The case of the Deepwater Horizon oil spill, *Regulation & Governance*.

- It highlights the overlap between regulatory and partnership networks, and the persistence of private sector production chain arrangements.
- The failures of federal regulators to adequately stage unannounced visits to regulated facilities are detailed.
- The study examines the accountability trade-offs present in complex regulatory regimes and the potential for an overreliance on market-based accountability in process-oriented regulatory regimes.
- The failures of the industry onshore decision makers are highlighted (see Table M.1).

APPLICATION N: ACCOUNTABILITY IN AIRLINE SAFETY REGULATORY AND PARTNERSHIP NETWORKS

Mills, R., Koliba, C., and Reiss, D. (2016). Ensuring compliance from 35,000 feet: Accountability and trade-offs in aviation safety regulatory networks. *Administration & Society*. 0095399716656223.

Abstract

A puzzle that faces public administrators within regulatory networks is how to balance the need for public or democratic accountability with increasing demands from interest groups and elected officials to utilize the expertise of the private sector in developing process-oriented programs that ensure compliance. This article builds upon the network governance accountability framework developed by Koliba, Mills, and Zia to explore the dominant accountability frames and the accountability trade-offs that shape the process-oriented regulatory regime used by the Federal Aviation Administration (FAA) to oversee and regulate air carriers in the United States.

Methods

Interviews; source document analysis

Ensuring the safety of millions of airline passengers is a shared responsibility of airline companies and the governments that regulate them. Mills, Koliba, and Reiss (2016) use source document analysis and interviews to better understand how the networks of the U.S. Federal Aviation Administration (FAA) partner with airlines to ensure safety. Figure N.1, below, provides a flow chart of the relationship between FAA inspections and several layers of airline self-reporting and disclosures.

The ability of the regulatory agency to partner with the industry demonstrates a robust form of collaborative and professional accountabilities. Airlines are willing to self-disclose equipment failures to the FAA, and in return, are allowed to devise their own safety assurance programs. A key actor in this particular system is the role that the labor unions—pilots and airline mechanics in particular—play in the process. Table N.1, below, applies the governance network accountability framework to this particular case.

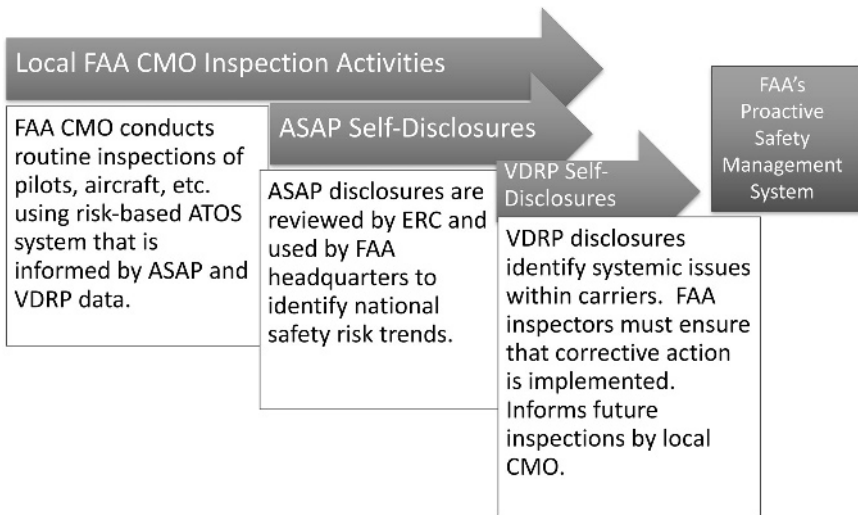


Figure N.1 Relationship between FAA Inspections and Voluntary Self-Disclosure.

This figure outlines the inspection regime used to ensure the safety of airplanes. The role of self-disclosure of airline personnel is highlighted, underscoring the important role that labor unions play in this process. Note: FAA=Federal Aviation Administration; CMO=Certificate Management Offices; ATOS=Air Transportation Oversight System; ASAP=Aviation Safety Action Program; VDRP=Voluntary Disclosure Reporting Program; ERC=Event Review Committee. Reprinted with permission: Mills, R., Koliba, C., & Reiss, D. (2016). Ensuring compliance from 35,000 feet: Accountability and trade-offs in aviation safety regulatory networks. *Administration & Society*.

Some key findings and advances stemming from this study include:

- Applies the governance network accountability framework to routine, non-crisis events in aviation regulation.
- Examines the trade-offs in accountability in process-oriented regulation by examining three voluntary reporting programs operated by the FAA and the airlines.
- Highlights the role that labor unions play in the process-based, self-regulatory networks of aviation safety.

Table N.1 Accountability in FAA's Voluntary Disclosure Programs during Routine Operations

<i>Accountability Frame</i>	<i>Accountability Type (To whom is account rendered?)</i>	<i>Application to FAA Voluntary Self-Disclosure Programs during Routine Operations</i>
<i>Democratic</i>	<i>Elected Representatives</i>	Funding for inspectors through appropriations process. Requests for reports on operation of ASAP and VDRP during FAA reauthorization process.
	<i>Citizens (and interest groups)</i>	Limited involvement due to FOIA protections of ASAP and VDRP disclosures.
	<i>Legal (Courts)</i>	FAA retains right to pursue legal and punitive action against air carriers and employees for non-disclosed violations. Limited involvement by outside legal entities due to non-discoverability of ASAP and VDRP disclosures in legal proceedings.
<i>Market</i>	<i>Shareholder/ Owner</i>	Desire of air carriers to protect reputation of their company and the industry for safety while also earning profits for shareholders by minimizing cost of corrective actions in ASAP and VDRP processes.
	<i>Consumer</i>	Limited due to inability to make informed choice on relative safety of carriers because of ASAP and VDRP confidentiality.
	<i>Labor</i>	Desire of air carrier employee unions to protect membership from punitive action and play a participatory role in enforcing safety standards during ASAP and VDRP processes. Also, desire by public sector unions to pursue additional inspector hiring and protect existing jobs from downsizing.

Table N.1 Accountability in FAA’s Voluntary Disclosure Programs during Routine Operations (continued)

<i>Accountabilty Frame</i>	<i>Accountabilty Type (To whom is account rendered?)</i>	<i>Application to FAA Voluntary Self-Disclosure Programs during Routine Operations</i>
<i>Administrative</i>	<i>Bureaucratic (Principals, supervisors, bosses)</i>	Desire by local FAA inspectors to avoid high-profile incident by following ASAP and VDRP guidance and by using data collected through disclosures to identify weaknesses in air carrier safety program.
	<i>Professional (Experts)</i>	Desire by FAA inspectors, air carriers, and union employees to learn from ASAP and VDRP reports at the local level through CASS and ATOS and at national level through ASIAs. Analysis is used to inform internal air carrier audits and FAA inspection activities.
	<i>Collaborative (Peers, partners)</i>	Air carriers, local FAA, and unions working together to improve safety through data sharing and analysis in ASAP ERCs. Achieving consensus for corrective actions through ASAP ERCs. Air carrier and local FAA office developing corrective action for systemic issues identified through VDRP. Air carriers sharing de-identified data with FAA through ASIAs to identify cross-cutting safety issues at national level.

This table applies the governance network accountability framework outlined in Chapter 9 to highlight how an accountability relationship exists within the FAA’s voluntary disclosure program. Reprinted with permission: Mills, R., Koliba. C., and Reiss, D. (2016). Ensuring compliance from 35,000 feet: Accountability and trade-offs in aviation safety regulatory networks. *Administration & Society*.

APPLICATION O: BRINGING DEMOCRATIC ACCOUNTABILITY TO ANTI-TERRORIST AND SECURITY NETWORKS

Zia, A., and Hameed, K. (2014). Politics of conflict in Pakistan's tribal areas: Vulnerability reduction in violence-prone complex adaptive systems. In M. M. Aman and M. J. Parker Aman (Eds.), *Middle East conflicts and reforms* (pp. 223–236). Washington, DC: Policy Studies Organization/Westphalia Press.

Abstract

Vulnerability, defined as the degree to which complex adaptive systems are likely to experience harm due to a perturbation or stress, has in recent years become a central focus of the global change and sustainability science research communities. This system level framework for vulnerability has been applied in a range of empirical assessments and socio-political contexts. In this study, we extend this knowledge by expostulating the complexity of reducing vulnerability of vulnerable populations in complex adaptive systems that are marred with violent conflict for decades. We present findings from our field research and interviews in Pakistan's tribal areas that have been afflicted with violent conflicts since 1979. We present a conflict map among different stakeholder groups in the tribal areas from the perspective of indigenous tribes, one of the most vulnerable populations, and demonstrate the complex politics of conflict that indigenous tribesmen have endured during transitioning from one conflict (1980s war against Russia) to another conflict (2000s war against Taliban). The political analysis of conflict in Pakistani tribal areas is aimed at illuminating the complexity of vulnerability reduction prevalent in the socio-political and economic environment of this region for the indigenous populations. We argue for the establishment of democratically anchored governance networks with active tribal participation to stabilize the region in a "post-conflict" context.

Methods

Interviews; source document analysis

Network Actors

- Tehrik-e-Taliban Pakistan (Hakimullah Group)
- Taliban (Molvi Nazir Group)
- Taliban (Molvi Gul Bahadar Group)
- Taliban (Asmatullah Shaheen Group)
- Taliban (Abdullah Mahsud Group)
- Taliban (Turkistan Baitani Group)
- Religious leaders (Deobandi School)
- Al-Qaida
- Ansr-ul-Islam Group (Khyber)
- Lashkar-e-Islam Group (Khyber)
- Taliban-e-Swat (Mulana Fazal-ullah Group)
- Khasadar force
- Para-military forces
- Pakistan Army
- Local lashkars (in army's support)
- Local political administration
- Local outlaws gangs (Criminal Group)
- Drug smugglers
- Arms dealers
- Business community (for supplies of food and other logistics)
- Local, national and international intelligence agencies
- Various tribal groups (those who settle scores with their opponents in the disguise of Taliban and terrorists)

Other Stakeholders

- Communities (civilian populations)
- Internally Displaced Persons (IDPs) and other trapped/vulnerable populations
- Politicians (JUI-F, ANP,JI, PLM-N, PPP, PTI)
- Traditional/religious leaders
- Media (local/national)
- Economic power brokers (business interest)
- Local political administration
- Spoilers
- CBOs / NGOs / INGOs / IOs

Figure O.1 List of Formal Network and Other Stakeholders Implicated in the PATA Region.

Adapted from Zia, A., and Hameed, K. (2014). Politics of conflict in Pakistan's tribal areas: Vulnerability reduction in violence-prone complex adaptive systems. In M. M. Aman and M. J. Parker Aman (Eds.), *Middle East conflicts and reforms* (pp. 223–236). Washington, DC: Policy Studies Organization/Westphalia Press.

Networks of tribes have lived in the Provincially Administrated Tribal Area (PATA) of Pakistan for centuries. The informal ties that bind a tribe together and allow different tribes to co-exist underscores the longstanding importance of social networks to the development of social capital and cultural capital.

In this case study of the PATA of Pakistan, Zia and Hameed (2014) examine the relationship between the indigenous tribal governance networks in place and its relationship to the Pakistani army and a wide range of other stakeholders ranging from international NGOs to arms dealers (see Figure O.1 above).

Drawing on Sorenson and Torfing's (2005) concept of "democratic anchorage," Zia and Hameed call for deeper engagement with the indigenous governance networks in the region and the prevailing anti-terrorist and security forces. They emphasize the critical role that cultural capital plays within advancing such concepts as "Qabail Swaraj" to promote peace activism in the region.

Some key findings and advances stemming from this study include:

- This study applies governance network analysis to the consideration of increasing democratic anchorage through the integration of tribal governance actors and their networks into a peacekeeping and security framework.

Notes

- 1 This chapter was written with assistance from Daniel Bromberg.
- 2 (2004a, p. 684).
- 3 Stone and Ostrower lay out the following questions that are still unresolved: "Do nonprofit boards actually know the wider legal obligations and policy expectations that pertain to their work? Do boards understand the structure of policy fields, including differences among funding streams and regulations (federal, state, and local) as well as the normative expectations attached to each? How do they take this information into account when formulating strategic direction or evaluating organizational performance? Do boards see themselves as willing and able to influence specific policy expectations as well as policy formulation?" (Stone and Ostrower, 2007, p. 431).
- 4 Developing such feedback loops was the basic premise of total quality management (TQM) efforts in the late 1980s and 1990s and continues to this day through participative decision-making models (PDM) of worker-directed performance evaluations. Research into labor-management relationships sheds additional light on the value that these kind of mutually reinforcing feedback loops play. An optimal participative decision-making model relies on the existence of "viable collaborative mechanisms" that are "available and understood by management and employees," premised on an authentic desire to establish "win-win" expectations (and realizations) among all parties. PDM requires that a level of "trust and mutual respect must exist

among the various parties” (Kearney and Hays, 1994, p. 47). When this trust and mutual respect exists, and mechanisms for communication and feedback flow between labor and owners and management, labor accountability is built on the informal capacity of individual workers, as well as workers organized into collective interests, to hold others’ accountable.

- 5 This discussion of CSR was greatly informed by the master’s thesis of Daniel Bromberg.

Chapter 10

Governance Network Performance Management and Measurement

An ounce of performance is worth pounds of promises.

—Mae West¹

This chapter focuses on the role that expectations about network performance play in the governance of networks. In other words, we concentrate on the fact that governance networks are governed and are expected to perform. In many cases, this performance is monitored and steered by the decision making of individual network managers, guided by laws, rules, and regulations enforced by institutions, and shaped by the policy tools designed and implemented to address public interests and provide public value. To varying degrees, network governance is informed and determined by the explicit performance standards that are set by network governors, defined in legislation, and negotiated through inter-jurisdictional or partnership agreements. However, expectations about network performance are also implicitly held by any person with a vested stake in the network's activities. Therefore, networks are governed by explicit and implicit performance standards that are both endogenous and exogenous to the network. The extent to which these standards influence networks structures and functions will vary. This observation has been the focus of many of those who have studied network performance thus far (Provan and Milward, 1995; Frederickson and

Frederickson, 2006; Turrini et al., 2010; Koliba, Campbell, and Zia, 2009; Provan and Kenis, 2007).

Network performance indicators can be used to guide decision making. As has been widely noted, performance goals, and the standards put in place to measure and monitor them, are only as good as the practices and systems put in place to use them. Within the nomenclature of performance management frameworks, the use of performance data to inform strategic decision making is suggested. Performance metrics are used in resource allocation, strategic planning, and tactical decision making. They are used to make a system or network responsive to the goals, desires, and ascriptions of certain agents—be they funders, regulators, or collaborators. Performance goals, explicitly or implicitly tied to performance indicators, may serve as inputs that guide endogenous or intra-network decision making. Perceptions of network performance may also be held by agents who are exogenous to a network. For instance, citizens and elected officials may pressure network actors to respond to concerns and adapt to changing conditions. These agents may not formally reside within the network, but can exert influence over the selection and use of performance goals (Radin, 2006; Frederickson and Frederickson, 2006; Moynihan, 2008).

When used effectively, performance standards can keep networks accountable. The use of performance measures to make decisions is guided by the kind of accountability ties that exist between members of a network, and between members of the network and those outside of the network. In other words, performances indicators can be used as an explicit standard around which accountability ties are formed and utilized.

However, *performance standards are contingent on the value(s) placed upon them.* Contemporary views of public performance and accountability underscore the appreciation that perceptions of performance are the products of social construction. As Deborah Stone has so eloquently laid out in her book, *Policy Paradox* (2002), determinations around what to measure and how to measure it are ultimately political considerations. This view is endorsed by Beryl Radin who, in her book, *Challenging the Performance Movement: Accountability, Complexity and Democratic Values* (2006), situates the contemporary interest in performance management within this very context. “The conclusion to be drawn here is that the management of performance within any public context, whether considered at the network level or not, is a political device used to govern. Questions of performance are eminently informed by who has power. The extent to which this power is wielded capriciously through some kind of political calculation, or through the use of more scientifically rendered, boundedly-rational, decision-making processes matters. In either instance, the capacity of agents to learn from the use of performance indicators is important and becomes the basis for a systems-view of network performance that can account for the role of politics and administrative science in managing performance” (Koliba, 2013, p. 88).

In this chapter, we discuss a particular kind of explicit standard that can drive accountability in governance networks: those equated with performance standards, indicators, and measures. We will recognize some of the major challenges and problems associated with performance management in general (Poister, 2003; Radin, 2006; Moynihan, 2008), and those performance management challenges arising within the kinds of interorganizational governance networks that we discuss in this book (Radin, 2006; Frederickson and Frederickson, 2006), and position governance network performance in terms of the use of data flowing through feedback loops and anticipate the role that communities of practice play in the effective design, collection, and use of performance data.

Governance and Performance

Those who have studied the role of performance measurement and management in public administration and policy studies have often equated performance with questions of governance (Moynihan, 2008). Likewise, those proposing that the field advance a “logic of governance” often frame governance with “performance or outcomes of public programs at the individual or organizational level as the ultimate dependent variable (Lynn, Heinrich, and Hill, 2000)” (Stone and Ostrower, 2007, p. 423). Performance management and performance measurement may be viewed as attempts to apply systematic and, ultimately, standardized criteria through which to assess the success of a social entity, be it at the individual, group, organization, or interorganizational levels.

Throughout this book we have described governance in terms of feedback loops occurring within any social systems aligned around policy functions, and equated governance with management and the range of managerial functions undertaken within vertically and horizontally arranged administrative relationships. We have discussed the intimate connection between governance and accountability. In this chapter, we interpret governance as a matter of monitoring performance. Performance management is a critical function in the effective governance of not only public bureaucracies, but entire governance networks as well. Monitoring of performance is a crucial feedback function within a governance system.

The application of fair and effective performance measurement in public administration and policy studies is no easy task. Beryl Radin, for instance, warns that “despite the attractive quality of the rhetoric of the performance movement, one should not be surprised that its clarity and siren call mask a much more complex reality” (2006, p. 235). Performance management is a complicated matter within *individual* organizations, let alone interorganizational networks. Herbert Simon (1957) and Charles Lindblom (1959) were some of the first to discuss the limits of rationality within social organizations. The same

factors that lead to “bounded rationality” and incrementalism in the course of day-to-day management and policy making cloud performance management practices across interorganizational network contexts.

Just what amounts to effective performance is a matter of perception. Performance data and standards come about through the social construction of knowledge (Moynihan, 2008) and the perceptions that form around it. Gregory Bateson has noted that “the processes of perception are inaccessible; only the products are conscious” (1972, p. 32). Performance data are products of perception, and ultimately, performance management is complicated by the question of whose perceptions matter. Presumably, those to whom accounts need to be rendered are in the best (or most legitimate) position to determine what it means for any social entity to perform, and presumably, perform effectively.

Perceptions about network performance are guided by one’s assumptions about what kind of information matters (Bateson, 1972). The performance measurement movement often privileges information presented as numbers and the kinds of categories that arise when things are counted. A critical consideration of performance measurement ignores the extent to which measures and numbers are defined and prioritized through a decidedly political process (Stone, 2002; Radin, 2006). Thus, performance measurement needs to be understood within the context of how and what kinds of knowledge matter, particularly the distinctions raised in the differentiation between the quantifiable and qualitative data. Without grounding performance management in these critiques, we run the risk of positioning performance measurement as the superimposing of “managerial logic and managerial processes on inherently political processes embedded in the separation of powers (Wildavsky, 1979; Rosenbloom, 2004; Aberbach and Rockman, 2000; Radin, 2006)” (Frederickson and Frederickson, 2006, p. 177). Performance measurement, if wielded uncritically, inevitably re-creates a politics-administrative dichotomy that bears little significance to the actual governance of governance networks. Performance measurement and performance management are already playing a significant role in the governance of governance networks. The role that performance management and measurement plays in governance networks calls us to again consider the challenges that arise when accountability and interests commingle, combine, and compete.

What Is Generalizably Known about Network Performance

Studies that have looked at the relationship between network structures, functions, and performance are being fueled by the longstanding network performance research of Keith Provan and Brint Milward (1995), whose research has primarily

focused on social service networks. In addition, the work of Kenneth Meier and Laurence O'Toole (2003) falls into this category. Their extensive study of the Texas educational system has helped to clarify what we know and do not know about network structures, the kinds of management functions carried out across these structures, and network performance. Representing the studies that have empirically examined the use of performance management within complex governance networks are David and George Frederickson's study of health care networks (2006) and Koliba, Campbell, and Zia's study of congestion management networks (2009) (see Application P). Capturing the tradition of network performance research that looks at the role of organizational learning and knowledge transfer, we draw on Donald Moynihan's conceptualization of the relationship between organizational learning and network performance (2008) and Robert Agranoff's comparative case study analysis of network performance management (2007). There is a sizable and growing body of literature emerging around each one of these traditions.

The research teams of Provan and Milward and Meier and O'Toole in particular are credited with having the most established research agendas on the "determinants of network effectiveness." With a focus on the performance of social service networks (Provan and Milward, 1995) and education networks (Meier and O'Toole, 2003), they have narrowed their attention to the relationship between network structure, network management, and network performance. Turrini, Cristofoli, Frosini, and Nasi undertook a meta-analysis of the literature on network performance, relegating their review to studies that have focused on policy implementation—specifically, social service delivery (2010), following the research line laid out by Milward and Provan. By narrowing their focus to networks carrying these types of functions, they have, rightly, set initial boundary conditions that are essential to a meta-analysis of this nature. Their study resulted in the identification of concepts and variables that they coded for client, community, and network level performance. Of the thirteen concepts that they found that had an impact on network performance, several stand out for closer review here.

- *Resource munificence.* The relationship between the existence of financial capital and network performance was a clear finding and underscores an observation that has long been assumed: that it takes money to produce results. In particular, Turrini et al. find that the role of local contributions to funding social service networks was critical to their positive performance, suggesting that in the case of social service networks, at least, local agents need to have "skin in the game."
- *System stability.* Several studies in the Turrini et al. meta-analysis focused on the relationship between the stability of the network and its capacity to

perform. The conclusion is that social service networks tend to perform better when they have stable external and internal environments. That networks need to have established certain thresholds of homeostasis is an important finding, and has a significant bearing on understanding the relationship between performance management and system's feedback.

- *Existence of bridging and bonding mechanisms.* A key finding from their meta-analysis concerns the important role that collaborative capacity plays within social service networks. Turrini et al. define this collaborative capacity in terms of cohesion and support from community and the existence of "integrating tools" such as the use of information technology and collaborative management tools to ensure network performance.
- *Intentional network steering processes.* Another key feature of this meta-analysis concerns the important role that the intentional steering mechanisms of the network play. Network performance is viewed to be positively influenced by the existence of network administrative organizations or lead organizations, suggesting here that within the context of social service networks, the exercise of vertical authority may be crucial to success.

The body of research surveyed by Turrini et al. focused on deriving determinants of network effectiveness by studying network properties that may, with some measure of certainty, be said to contribute to network performance. The challenges associated with this approach to network performance lie in the uncertainty associated with isolating the causal properties of these structures. The nonlinearity of network dynamics cannot be taken for granted, nor ignored. That said, this line of inquiry for network performance studies is crucial if we are to develop more sophisticated understandings of the black box of network process.

A second line of research into network determinants is worthy of mention here. Meier and O'Toole's long-term study of the Texas educational system has made major contributions to the network determinants literature (Meier and O'Toole, 2003, 2005; O'Toole and Meier, 2004b). In particular, their research has focused on the role that certain network management strategies play in bringing about higher performing schools. Their research sheds light on the particular roles that network managers play in building and utilizing network structures to achieve functional aims. Two particular conclusions to be drawn from this research are provided below:

- *Network manager's capacity to bridge and boundary span.* Meier and O'Toole frame this capacity for managers to pursue "networking outward with

multiple other actors and with frequency.” Such activities have been shown to “strengthen program performance in the short run and also build the baseline for future enhancements” (Meier and O’Toole, 2003, p. 697).

- *Network manager’s capacity to leverage network resources.* The capability to take advantage of the resources available as networks are built is carried out through the actions of network managers. As Meier and O’Toole observe, “Network management helps to free . . . units from the constraints of existing routines and allows them to use selected available resources more effectively” (Meier and O’Toole, 2003, p. 697). This capacity may be viewed as ensuring that the accomplishments of the whole network are more than just the sum of its parts.

The picture painted in this brief overview of the seminal works in the network determinants and performance literature is one in which both the network structures themselves as well as the network manager’s roles in building and leveraging the network are demonstrated.

The Performance Measurement Movement

Initiatives geared toward collecting and using performance data in governments have their roots in the performance management systems first employed in the private sector. The reinventing government reforms of the 1990s were fueled by the new public management’s (NPM) assumptions regarding the efficacy of running governments more like businesses. We have already discussed the kinds of performance standards adopted by the public, private, and nonprofit sectors.

As noted in the previous chapter the private sector is governed by the pursuit of one performance measure in particular: profit. The systematic collection of corporate performance data has been a critical element of publicly traded firms appearing in quarterly reports and other financial disclosures. The successful functioning of financial markets is premised on the availability and use of information regarding the performance of firms. A major assumption guiding the use of corporate performance data is the coupling of efficiency and profits. Advocates of NPM often believe that the “hidden hand” of markets may be applied to the functions of government. Market forces operate efficiently when “perfect” information is exchanged between buyers and sellers. The adoption of performance measurement systems across government was presented by reinventing government gurus David Osborne and Ted Gaebler (1992) as a way to unleash the entrepreneurial energies and efficiencies most often equated with markets and market forces.

Contemporary Uses of Performance Measures in Government and Nonprofit Organizations

- Monitoring and reporting
- Strategic planning
- Budgeting and financial management
- Program management
- Program evaluation
- Quality improvement
- Contract management
- External benchmarking
- Communication with the public

See Poister (2003, pp. 9–15) for a breakdown of these functions.

Historically, the move to assess and manage performance has been most often characterized as an effort to bring about greater accountability within organizations. Donald Moynihan asserts that the “performance management doctrine is based on the logic that the creation, diffusion, and use of performance information will foster better decision making in government, leading to dividends in terms of political and public accountability, efficiency and budget decisions” (Moynihan, 2008, p. 10).

The modern application of performance management systems to the operations of governments also has its origins in the scientific management movement of the early twentieth century. The father of scientific management, Frederick Taylor, was one of the early proponents of the systematic collection of performance data and the use of such data to advance effective and efficient practices. In later decades, reforms to governmental budgetary systems such as planning programming and budget systems and zero-based budgeting in the 1960s and 1970s were attempted in efforts to link performance data to decision making. The performance measurement movement came into full fruition with the reinventing government initiatives of the early 1990s. The Clinton administration’s National Performance Review (NPR) led to the Government Performance and Results Act (GPRA) that has subsequently been extended in thirty-three states (Moynihan, 2008). GPRA has been institutionalized across the federal government through the Office of Management and Budget (OMB) through the extensive implementation of the Program Assessment Rating Tool (PART) (Frederickson and Frederickson, 2006; Moynihan, 2008).

Performance Management Systems

Viewed through the lens of organizational behavior (Mintzberg, 1983), complex systems dynamics (Boland and Fowler, 2000), and organizational learning (Moynihan, 2008), performance management systems operating across organizational and interorganizational contexts are interlocking processes that are intentionally designed to manage the flow of feedback within or across units.

Moynihan observes that “performance management systems are designed to take information from the environment, through consultation with the public, stakeholders, public representatives, and [other relevant actors].” Performance management systems provide a means by which critical actors “engage in coding, interpreting and refining information from the external environment and internal stakeholders into a series of information categories such as strategic goals, objectives, performance measures, and targets” (2008, p. 6). To be an effective performance management system, the results of analysis must be used by policy makers, network managers, and other key decision makers to guide collective action.

Dialogue around performance data “will not necessarily engender consensus and agreement.” Moynihan asserts that consensus “depends greatly on the homogeneity of the actors involved, their interpretation of the data, their ability to persuade others, and their power in the decision process” (2008, p. 112). Effective performance management systems facilitate the use of “dialogue routines” that “require a commitment of time by staff and a setting where performance data that might otherwise be ignored is considered. . . . Such routines provide an opportunity to access information, make sense of this information, and persuade others” (Moynihan, 2008, p. 110). In effective performance management systems, actions and strategies are collectively agreed upon, and “those made responsible are not only given the task but also the rationale, thus, enabling them to understand the ‘what’ and ‘why.’ Through understanding this, there [is] an increased likelihood of implementation” (Savas, 2005, p. 136). Within performance management systems, “dialogue forms a basis of social cooperation,” and where commitments around common agreements are reached. Moynihan concludes that “interactive dialogue therefore acts as a social process that helps to create shared mental models, has a unifying effect, and helps to develop credible commitment for the execution phase” (2008, p. 111).

Performance *management* systems are guided by the performance *measurement* theories that inform the mental models and decision heuristics of critical actors. These mental models are often shaped by certain assumptions regarding the ascription of causality, and assumptions regarding the relationship between inputs, processes, outputs, and outcomes. It has been suggested that the greater the consensus about causes and effects, the more robust the performance management system (Moynihan, 2008). Henry Mintzberg referred to these processes as “performance control systems” (1983, p. 145).

Moynihan asserts that the rationale for advancing performance management systems is “based on the logic that the creation, diffusion, and use of performance information will foster better decision making in government, leading to dividends in terms of political and public accountability, efficiency and budget decisions” (2008, p. 10). In short, it is assumed that “performance measurement is a stimulus to strategic behavior” (De Bruijn, 2001, p. 21) that should, in theory, ultimately lead to effective outcomes.

Beryl Radin (2006, p. 19) describes the traditional assumptions that have guided the introduction of performance management systems as leading to effective outcomes:

- Goals can be defined clearly and set firmly as the basis for the performance measurement process.
- Goals are specific and the responsibility of definable actors.
- Outcomes can be specified independently of inputs, processes, and outputs.
- Outcomes can be quantified and measured.
- Outcomes are controllable and susceptible to external timing.
- Data are available, clear, and accurate.
- Results of the performance measurement can be delivered to an actor with authority to respond to the results.

The clarity of goals, the measurability of performance standards, the availability and accessibility of data, and the utilization of those data to guide decision making and action are all said to be critical components of an effective performance management system. Figure 10.1 illustrates the flow of data collection to analysis to action.

TYPES OF PERFORMANCE MEASURES

Resource
Workload
Output productivity
Efficiency
Service quality
Effectiveness
Cost-effectiveness
Customer satisfaction
Integrated sets of measures

See Poister (2003, pp. 49–50) for breakdown.

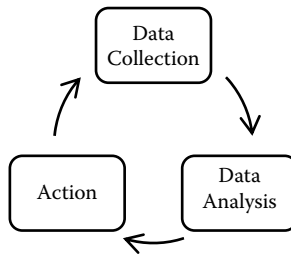


Figure 10.1 Performance Management Systems.

(Compiled from Poister, 2003, pp. 15–17.)

Theodore Poister describes performance measurement as a continuous cycle of inquiry that encompasses the collection and processing of data, the analysis of these data, and the utilization of this analysis to adjust actions and behaviors. Poister posits that in effective performance management systems the analysis of data is carried out through the act of rendering comparisons over time, against internal targets, across units, and against external benchmarks (2003, p. 16). The analysis of data may lead to decisions regarding strategy, program delivery, service delivery, day-to-day operations, resource allocation, goals and objectives, and performance targets, standards, and indicators (2003, p. 16).

Performance measurement implies certain assumptions about causality, namely, that inputs into the system (however defined) shape the processes undertaken, which in turn produce certain outputs leading to short-, intermediate-, and long-term outcomes. In Chapter 7, we discussed how systems dynamics have been described in terms of inputs, processes, outputs, and outcomes. This model of systems dynamics has been adopted in some types of performance measurement initiatives, particularly those associated with the evaluation of programs. The input, process, output, and outcome model is often called the “logic model” (Poister, 1978, 2003). The logic model is a commonly adopted form of performance evaluation used in government and nonprofit organizations.

Input measures are often framed in terms of resources contributed to the system that may take any number of different forms of capital (financial, physical, human, social, natural, and knowledge). “Performance advocates often argue that organizations emphasize the importance of inputs to the exclusion of other elements and, as a result, equate the availability of these resources with success” (Poister, 1978, p. 15). “Information in this category deals with the amount of resources actually used in the operation of a policy or program” (Radin, 2006, p. 191). “Inputs are recognized as valuable only insofar as they produce desired outputs and measurable results” (Savas, 2005, p. 12).

Process measures usually involve information that may be collected about the activities being undertaken within the social system. Variables employed to study

and evaluate organizational behavior and management practices are sometimes defined as process measures. Process measures may also include actors' perceptions of the practices undertaken. Paul Posner describes process measures in the context of governance networks this way:

Goals emerge from the interaction of actors in the network. Implementation and performance are evaluated based on the capacity to cooperate and solve problems within networks. The focus is not on goal achievement but on whether conditions encourage the formation and sustainability of positive interactions across the network. Criteria for network management include creating win-win situations that make non-participation less attractive, limiting interaction costs, promoting transparency, and securing commitment to joint undertakings.

(Posner, 2002, p. 546)

Given the wide array of potential process dynamics, "processes are often counted in varying or inconsistent ways: as a result, aggregated statistics about processes can be misleading" (Radin, 2006, p. 191). Additionally, more attention needs to be paid to the development of process measures that are constructed around democratic norms and rules (Klijn, 2001).

Output measures hinge on results that may be directly ascribed to the activities undertaken within the system. Outputs are generally the most tangibly visible, measurable representation of "the amount of work performed or the volume of activity completed" (Poister, 2003, p. 40). "Outputs are products and services delivered. Outputs are completed products of internal activity: the amount of work done within the organization or by its contractors" (Poister, 2003, p. 15). Outputs may also be used to assert a causal relationship between the actions undertaken and the impacts of those actions on the wider social and natural environment. "This category measures the amount of products and services completed during the reporting period . . . tabulations, calculations, or recordings of activity or effort that [can] be expressed in a quantitative or qualitative manner. In some cases, process measures are subsumed within this category" (Radin, 2006, p. 191). "Outputs are best thought of as necessary but insufficient conditions for success" (Poister, 2003, pp. 38–39). We have highlighted how the universality of the one output measure guiding market accountability, profit, is taken into consideration in governance networks within which for-profit firms are implicated.

Outcome measures are often the most difficult to determine because they are constructed out of a chain of causality that must take into account all of the inputs, processes, and outputs implicated in the social system. "Outcomes . . . are the substantive impacts that result from producing these outputs" (Poister, 2003, p. 40). Much has been written regarding the complexities of coming to

agreement around the construction of causal relationships. Outcome indicators are “a numerical measure of the amount or frequency of a particular outcome” (Radin, 2006, p. 15). Often implicated in society’s most “wicked problems,” governance networks operate in a highly politicized environment through which policy outcomes get framed by stakeholders differently (Stone, 2002). Outcomes are an “event, occurrence, or condition that is outside the activity or program itself and is of direct importance to program customers or the public” (Poister, 2003, p. 15). “Outcome information defines the events, activities, or changes that indicate progress toward achievement of the mission and objectives of the program” (Radin, 2006, p. 191). Outcomes may be registered in the short to long term. “Intermediate outcomes are activities that are expected to lead to a desired end but not ends in themselves” (Radin, 2006, p. 192).

Challenging the Performance Paradigm

In ascertaining the challenges with the performance paradigm, Moynihan concludes that “there is likely to be no single definitive approach to (a) interpreting what performance information means and (b) how performance information directs decisions” (2008, p. 102). He goes on to add that “information selection and use occurs in the context of different beliefs, preferences, and cognitive processes, and they will reflect organizational power and politics. Information providers will try to shape outcomes by choosing what information will be collected and highlighted. Each measure is representative of values and accompanied by the assumption that the organization should be making efforts that will have an impact on the measure” (2008, p. 106). Just why this is so has been the subject of extensive analysis.

George Frederickson (1999) and Beryl Radin (2006) have noted that the major challenges associated with performance measurement concern the fallacies regarding the chains of causality that arise between inputs, processes, outputs, and outcomes; the measurability of performance indicators; and relatedly, the availability and quality of data. Radin has deemed the traditional view of performance measurement as being overtly rationalistic and naïve, observing how performance measurement traditionalists view information as readily available and value neutral (2006, pp. 184–185). These critiques of performance measurement are tied to discussions of the limits of positivism, the assertion that knowledge and information are a product of social construction, and critiques of rational action. Although these concerns have been raised within the context of performance measurement within a single organization, we find these challenges accentuated when more actors are added. Before moving to particular challenges relating to performance management within governance networks, it is worth considering some of the major challenges associated with the performance

measurement paradigm that is so prevalent today. These challenges are defined in terms of the dualisms created through the correlation of causes and effects, questions concerning the validity of data, and the challenges associated with the costs of data.

Exploring the challenges associated with managing complexity in the public services, Phillip Haynes observes that one of the dangers of performance management lies in “seeing issues in terms of simplistic cause and effect rather than complex entanglements and changing dynamics.” He goes on to add that “this is the nature of the problem that complexity has with performance management. It is potentially a dualism, a false separation of two aspects, an erroneous separation of means and ends, process and outcome” (Haynes, 2003, pp. 90–91).

In a performance measurement framework, the relationship between inputs, processes, outputs, and outcomes is premised on certain assumptions regarding the chain of causality that exists between these elements. Poister warns that “if the underlying program logic is flawed—if the assumptions of causal connections between outputs and results don’t hold up in reality—then the desired outcomes will not materialize, at least not as a result of the program” (Poister, 2003, p. 39). In discussing the policy paradox, Deborah Stone has underscored how causality and assumptions about the relationships between causes and effects are socially constructed (2002). As critics of performance measurement have noted, definitions of performance and the outcomes that result from performance are subject to the perceptions and interpretations of stakeholders and faulty assumptions regarding the relationship between means and ends. The complexity argument laid out by Haynes is very similar to the one laid out by Stone, who observes how the ascription of causal relationships is, in the realm of public policy and management, wrought with ambiguities (2002).

Radin has warned that “one needs to take care and avoid ascribing events to a single cause” (2006, p. 237). Claims regarding the validity of particular couplings of causes and effects, and ultimately, problems and solutions, are made by and through certain policy actors, and as we will assert here, networks of policy actors operating within and across mixed-form governance networks. In a sense, the building of a performance management system around a set of assumptions regarding a relationship between causes and effects, inputs and outputs, and outputs and eventual outcomes, is grounded in validity claims made by certain combinations of stakeholders who are implicated in one or more of the accountability relationships discussed in Chapter 9. Critiques of performance management systems highlight the limits of rationality and a growing wariness of the complexities inherent to most collective endeavors.

Critics of performance measurement are concerned about the equation of data with “facts,” and the air of objectivity that accompanies the presentation of data as facts. Sociologists dating back to Émile Durkheim have explored,

at length, how social facts get socially constructed and mediated through social interactions (Collins, 1988). Social scientists have long understood that the validity of certain social facts and assertions linking causes and effects is determined through any number of validity claims. “Face,” “consensual,” “correlational,” “predictive,” “democratic,” “catalytic,” and “outcome” validity can all be used to justify the claims made about performance data (Poister, 2003, p. 91).

Validity claims are also shaped by perceptions regarding the measurability of social facts. Deborah Stone has documented how the capacity to describe social facts through numbers helps to shape perceptions of public problems and solutions. She recognizes that the choices made around what to measure (e.g., what to count) define what is important. The fear here is that, as David and George Frederickson observe, “the measurable drives out the important” (Frederickson and Frederickson, 2006, p. 102), with the measurability of the input, process, output, or outcome dictating the goals and functions that are ascribed to. In essence, the emphasis placed on the measurable performance indicators leads to goal displacement, and potentially away from what is actually important or desirable.

Performance measurement is often advanced under a certain set of assumptions that data are available, consistent, accurate, and inexpensive (Frederickson and Frederickson, 2006, p. 16). These assumptions mask the very real transaction costs that come with any performance management system. Following Francis Fukuyama’s line of thought, Beryl Radin observes that “formal systems of monitoring and accountability . . . either entail very high transaction costs or are simply impossible because of the lack of specificity of the underlying activity.” Further, she notes that “the effort to be more ‘scientific’ than the underlying subject matter permits carries a real cost in blinding us to the real complexities of public administration as it is practiced in different societies” (Radin, 2006, p. 6).

Brint Milward and Keith Provan have recognized that “high transactions costs are associated with monitoring performance. . . . In the absence of a price mechanism to determine cost—and in the absence of outcome data to determine quality—trust and the reputation for credible commitments become important in determining who it is that agencies contract with, and for what services” (1998, p. 205). Performance management systems may tend to exacerbate principal-agent problems. As Paul Posner observes, “Inputs and level of effort are more easily assessed and tracked by principals. By contrast, the link between a given level of funding and prospective or actual performance is often more uncertain and difficult for principals to ascertain independent of agents” (Posner, 2002, p. 541).

Recognizing the possibility of principal-agent dynamics within any performance management system leads to inevitable concern regarding information

asymmetries—e.g., those instances when a principal or a co-equal has access to information and or knowledge that other members of the network do not. When considered at the level of governance networks, information asymmetries may be compounded as questions of who owns data and who has access to data become points of contestation. When data are viewed as the property of some network actors and not others (as in the case of certain forms of proprietary data that private contractors claim), the capacity to share, analyze, and make decisions using the type of analysis process found in Figure 10.1 is seriously compromised.

Challenges Associated with Performance Measurement Initiatives

- Inadequate training and technical know-how for developing performance measures;
- Lack of resources for measurement design, data collection, and monitoring;
- Different expectations about what performance measures are designed to do and for what they will be used;
- Fear by agencies that they will be asked to develop outcome measures for results that are not easily measured, that are shaped by factors outside their control . . . and that are not amenable to assigning responsibility to particular actors.

Source: Durant, in Golembiewski (Ed.). (2001). *Handbook of organizational behavior* (2nd ed., pp. 702–703). New York: Marcel Dekker.

On a practical level, transaction costs surface when performance management systems require the infusion of financial, physical, human, and knowledge capitals. The tangible costs of collecting, analyzing, and using performance data to make decisions and hold actors accountable can be debilitating (Cooper, 2003). Thus, there is a real need to make sure that the right kind and appropriate volume of data are collected. “If there is a large range of performance measures covering different areas, the danger then becomes that services are over-audited and this creates too much data collection and analysis work for middle managers” (Haynes, 2003, p. 104).

Performance Management Systems in Governance Networks

All of the challenges associated with performance management described in the previous section surface in the more relatively simple contexts of an organization. The validity of data, the social construction of what gets counted and why, and the role of transaction costs can be found within performance management systems operating within a single organizational domain. Frederickson and Frederickson (2006) conclude that when multiple actors across multiple scales of government, businesses, and nonprofits get implicated as critical actors within a governance network, these challenges only get accentuated.

In writing about the challenges of performance measurement in networked contexts, Radin observes that “the construct of the American political system calls for an assumption that the multiple actors within the system have different agendas and hence different strategies for change. Performance measurement should thus begin with the assumption of these multiple expectations and look to the different perspectives found [across the spectrum of network actors]” (2006, pp. 239–240). Thus, in complex, networked contexts, not only do the costs of data and the challenges of access to data pervade, but questions concerning what performance data are to be collected, which data matter, and how these data are used to inform decisions are vaulted into ever more complex multi-institutional arrangements. These challenges may be particularly visible in the processes that networks undertake to define, collect, analyze, and use performance data to guide decision making and collective action. When performance management systems are employed across a governance network, “the ability of any single actor to establish its own blueprint for a performance management model, define the meaning of performance information, or determine how performance information is used” is limited (Moynihan, 2008, p. 10). The potential loss of control over how performance is measured and managed may be viewed as a potential transaction cost that some network actors may find too steep to bear.

A second factor that impacts how performance management systems operate within governance networks concerns the state of the existing performance management systems and “performance measurement culture” (Frederickson and Frederickson, 2006) that specific network actors bring to the network. Organizations across networks are “likely to vary considerably in the data systems that they have put in place; even if the system is considered to be effective when viewed within the organization’s boundaries, most of the systems that have been devised are not easily converted to integrated data systems” (Radin, 2006, p. 206).

In studying how performance management systems operate across organizations, Moynihan (2008, pp. 112–113) formulates the following set of assumptions

that need to be considered as performance management systems are described and evaluated:

- Different actors can examine the same programs and come up with competing, though reasonable, arguments for the performance of a program based on different data.
- Different actors can examine the same performance information and come up with competing, though reasonable, arguments for what the information means.
- Different actors can agree on the meaning of performance information/program performance and come up with competing solutions for what actions to take in terms of management and resources.
- Actors will select and interpret performance information consistent with institutional values and purposes.
- Forums where performance information is considered across institutional affiliations will see greater contesting of performance data.
- Use of performance information can be increased through dialogue routines.

The definition of what constitutes effective outcomes for a governance network is a critical question to be addressed. There have been some studies conducted that look at the efficacy of network structures in achieving ascribed outputs or outcomes (see as a representative: Marsh and Rhodes, 1992; Heinrich and Lynn, 2000; Koontz et al., 2004; Imperial, 2005; Frederickson and Frederickson, 2006; Koliba, Mills, and Zia, 2011; Rodriguez et al., 2007). The highly contextual nature of the environments that governance networks operate within, coupled with the highly contextual nature of most of the perceptions of the network actors within the network, renders the development of consensus around common definitions of viable network performance measures very difficult to achieve.

An additional challenge to performance management within governance networks pertains to differences in the geographic scale of individual network actors. Locally oriented network actors will likely focus on performance indicators that fall within their domain, while regionally, nationally, or internationally oriented network actors will look toward performance indicators that capture the scale and scope of their domains. One way that scale differences are handled is through the aggregation of data from multiple data points. However, aggregated data are not enough to compensate for geographic differences among actors, particularly when the identities (and by inference, ascriptions of causalities) of local actors get lost when their data are combined with other data points of either similar or dissimilar geographic scale. Ultimately, the central problem with performance management systems in complex governance networks lies in “determining which party defines the outcomes that are expected” (Radin, 2006, p. 157). Furthermore, the differences in geographic scale may be combined with

a “lack of capacity for experimentation, the conservative identities of actors who want to preserve the status quo, and the failure to resolve the internal conflicts between the actors that struggle over the assessment of experiments and the formulation of strategies for institutional reform” (Sorensen and Torfing, 2008, p. 105). As a process of active experimentation, the theories of causality that are either implicitly or explicitly assumed when data on performance are collected become highly problematic when more actors are added and as the wickedness of problems gets compounded.

In order to develop more sophisticated understandings of how performance management can successfully unfold in complex networked environments, more emphasis needs to be placed on “the entanglement of the stages of performance management that go further than a cause and effect understanding.” It is within this context that our consideration of governance networks as complex systems comes into the foreground as we focus on “the interaction and resulting feedback between different elements of the process and outputs.” This feedback process itself “offers us the best understanding of how performance is constructed” (Haynes, 2003, p. 96).

The priorities of sectors are worth considering here. The performance standard unique to the state sector is meeting public needs, delivering public policy, and providing public value. The overarching performance standard of the private sector is profit. Observing the distinctions between public sector and private sector performance goals, Radin states:

The elements in a democracy lead one to acknowledge that much of public action carries multiple and often conflicting goals. As a result, unlike the private sector where profit becomes the ultimate measure of success, it is difficult to establish a standard against which to measure outcomes.

(2006, p. 38)

The overarching performance standard of the nonprofit sector is meeting the organizational mission, another facet of nonprofit governance that is highly context-specific and situational. Different performance standards across the public, private, and nonprofit sectors connote a continuum of clearly defined measures: near-universal measures (such as profit), to the ambiguity-riddled challenges of measuring successful public policies (Stone, 2002), to the highly context-specific and mostly localized mission-driven performance standards ascribed to individual nonprofit organizations (Stone and Ostrower, 2007).

Determining how performance is defined between network members is complicated by the capacity of collaborators to possess their own unique perspectives around what matters, what counts, and why. As Stephen Page puts it, “reasonable people may disagree about which results to measure, and

appropriate data can be difficult to track” (2004, pp. 591–592). Despite these challenges, the application of performance measurements to governance networks is important because of the link between performance measurement and accountability. Those to whom accountability must be rendered may be inclined to rely on certain kinds of performance measurement data (construed here in terms of both quantitative and qualitative forms) in the execution of their obligations as accountants.

Using Data to Drive Decisions and Actions

In Chapter 7 we alluded to the role that performance management systems play in facilitating feedback. Performance management systems (PMS) should be designed to serve as the proverbial thermostat for the network, facilitating the flow of data through some kind of comparator that compares performance data with goals and benchmark indicators. When or if the data and goals are out of line, administrative systems are in place to bring the network back into its desired state. Performance management systems have been described as providing a form of double-loop feedback operating within the system (Haynes, 2003, p. 95).

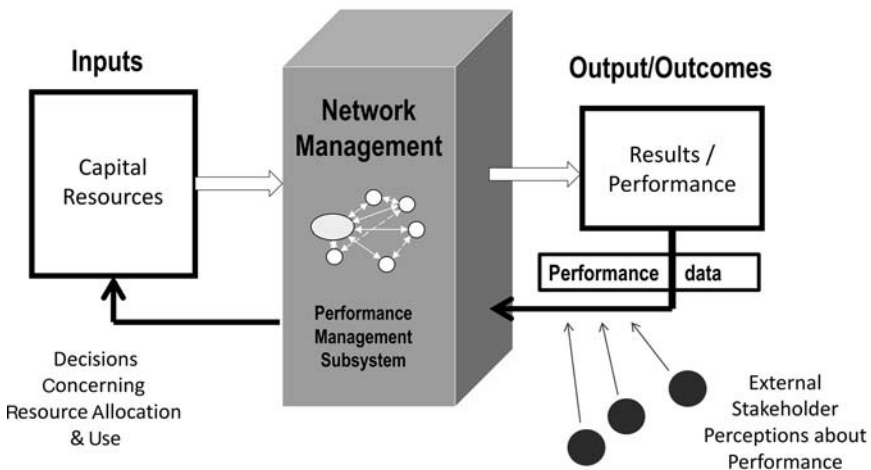


Figure 10.2 Network Performance Management Systems.

Reproduced with permission: Koliba, C. (2013). Governance network performance: A complex adaptive systems approach. In Agranoff, B., Mandell, M., and Keast, R. (Eds.), *Network theory in the public sector: Building new theoretical frameworks* (pp. 84–102). New York: Routledge.

Figure 10.2 expands upon the traditional logic model approach to performance management described earlier in the chapter. This figure suggests how, ideally, a feedforward dynamic unfolds as performance data is interpreted by external stakeholders. These external perceptions are processed, internal to the network, by some manifestation of a performance management system, presumably, defined here as a specific subnetwork of network managers and leaders. The deliberations of the internal PMS would, optimally, drive resource allocation decisions.

Donald Moynihan has suggested that effective performance management systems serve as the space where “interactive dialogue” between critical stakeholders takes place. He grounds this assertion in the classical performance management doctrine discussed earlier in this chapter by claiming that “performance management doctrine is based on what is essentially a theory of learning. Decision makers are expected to learn from performance information, leading to better-informed decisions and improved government performance.” He goes on to add that “performance management doctrine has been relatively weak in identifying routes to learning” (Moynihan, 2008, p. 164). The identification of “routes to learning” serves as a critical feature of performance management systems within governance networks. According to Moynihan, these routes to learning are predicated on the design and use of dialogue routines that are “specifically focused on solution seeking, where actors collectively examine information, consider its significance, and decide how it will affect action” (2008, p. 167). By grounding performance management systems in organizational learning theory, Moynihan provides a solid conceptual link between the evaluation of performance data, the dialogue about these data, and presumably, decisions leading to action. Educational theorist Jonathan Goodlad and colleagues (2004) referred to this process as a “cycle of inquiry,” illustrated in Figure 10.3.

Conceptually, the cycle of inquiry draws from John Dewey’s (1963a, 1963b) pragmatic philosophy of the social construction of thinking and learning from experience, Kurt Lewin’s (1947) theory of action research, and David Kolb’s (1984) experiential learning cycle. The cycle of inquiry is predicated on the assumption that groups that share common practices, interests, or roles, and who have a space in which to engage with each other, can be said to be immersed within a cycle of dialoguing, deciding, acting, and evaluating (DDAE) (Gajda and Koliba, 2007).

The DDAE cycle of inquiry provides a crucial theoretical link between concepts of social learning and knowledge management, and decision-making theory. Within governance networks, the cycles of inquiry that supposedly anchor performance management systems take place through a “forum” comprised of members of the network. Such forums likely function at the group level and operate as communities of practice. Radin refers to these communities of practice as “performance partnerships” (2006, p. 168). Performance management systems

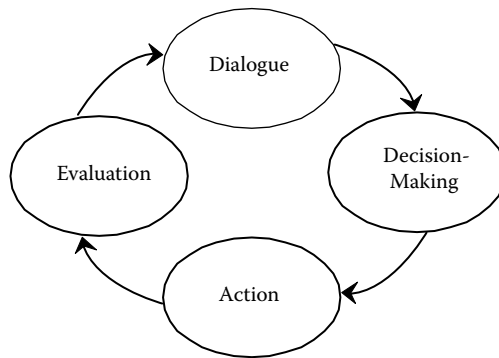


Figure 10.3 DDAE Cycle of Inquiry.

may also be described as those communities of practice and action arenas within which critical decisions are made about the network. In an ideal sense, the dialogue that unfolds within these spaces forms “a basis of social cooperation, [in which] people feel committed to the agreements researched in such a context. Interactive dialogue therefore acts as a social process that helps to create shared mental models, has a unifying effect, and helps to develop credible commitment for the execution phase” (Moynihan, 2008, p. 111).

Performance Management and Network Accountability

The dialogue, decision-making, action, and evaluation cycle of inquiry that results from the effective implementation of performance management systems hinges on the extent to which they are integrated into accountability regimes of the governance network. If those to whom accounts are to be rendered are not actively engaged in these cycles of inquiry (either as internal network members, or external principals), any attempts to systemically collect and use performance data will be undertaken for naught. *Without an audience to engage in an interactive dialogue around performance data, there exists little possibility that accountability and performance management systems will be aligned.*

Although “availability of performance information lends legitimacy” to a governance network, performance data must still be used to “maintain both internal and external accountabilities” (Moynihan, 2008, pp. 36, 68). Table 10.1 outlines some questions regarding performance measurement that arise as we consider accountability through each accountability type that we introduced in Chapter 9.

The performance management questions raised within each of the accountability types are certainly not offered as an exhaustive list. Nor do the critical considerations assigned to each accountability type convey the complete scope of possible critical considerations that arise when different accountability types are considered within a performance management context.

The point remains that when the performance management systems of a governance network are devised, due consideration must be given to those for whom performance data matter. We have cited some of the challenges that arise when the performance indicators that matter to both those to whom accounts are rendered and those responsible for rendering the accounts do not align. We acknowledge and repeat Page's ascertainment that "reasonable people may disagree about which results to measure" (Page, 2004, pp. 591–592). Some actors implicated in an accountability structure may be more centered on the political implications of performance data, viewing the data as a means to "score points" or achieve policy objectives that lie well beyond the scope of the governance network's operations. We also recognize the potential that some actors who should be paying attention to performance data are not, whether it is because the data are technically inaccessible, one lacks the time to seriously consider performance data, or one lacks the interest. All of these potential challenges to coupling accountability structures with performance management systems persist.

Systems theorist Russell Ackoff notes that "system performance depends critically on how the parts fit and work together, not merely on how well each performs independently; it depends on interactions rather than on actions.

FACTORS CONTRIBUTING TO THE SUCCESSFUL INTEGRATION OF PERFORMANCE MANAGEMENT SYSTEMS WITHIN GOVERNANCE NETWORKS

- Commitment of agency leadership (both principals and agents)
- A belief in the logic of performance measurement as a means of ensuring accountability
- A highly developed organizational culture
- Adequate funding for the performance measurement framework
- Performance is thought by agency executives or their third parties to increase the prospects for agency effectiveness; they will embrace it and make it work

Source: Frederickson and Frederickson. (2006). *Measuring the performance of the hollow state* (pp. 63, 172). Washington, DC: Georgetown University Press.

Furthermore, a system's performance depends on how it relates to its environment—the larger system of which it is a part—and to other systems in that environment" (Ackoff, 1980, p. 27). We believe, following those who have promoted the "logic of governance" as one that is anchored in the coupling of accountability and performance management (Lynn, Heinrich, and Hill, 2000), that those responsible for rendering accounts and those to whom accounts are rendered actively engage in interactions around the collective review of the governance network's performance.

Both practitioners within and researchers of governance network performance will need to focus on those communities of practice and action arenas operating within the governance network that routinely collect, analyze, discuss, and make decisions based on performance data. These spaces where "performance partnerships" (Radin, 2006) take place have been documented in the study of performance management systems operating with the networks facilitated by regional metropolitan planning organizations (Koliba, Campbell, and Zia, 2009—see Application P at the end of this chapter; Zia et al., 2015—see Application Q at the end of this chapter). The designation of committees to collect, process, discuss, and make decisions based on performance data has been mandated by the U.S. Department of Transportation. These guidelines are presented in Figure 10.4 (U.S. DOT, 2009).

The designation of members of regional planning governance networks to work within committees to process performance data suggests a great deal of foresight on the part of federal funders and regulators. Although much more empirical work is needed to study the composition and make-up of these committees, we surmise that it is these types of groups, operating as communities of practice, engaged in interactive dialogue and continuous cycles of inquiry, that serve as critical agents around which the governance of complex governance networks can (and in many cases does) take place. As Moynihan aptly notes, these performance management processes "require a commitment of time by staff and a setting where performance data that might otherwise be ignored is considered. . . . [These processes] provide an opportunity to access information, make sense of this information, and persuade others" (2008, p. 110). The composition of these committees and the efforts made to convey the results of data analysis to external stakeholders to whom the network is accountable may provide a great deal of information about the extent to which performance management and accountability structures are effectively integrated within governance networks. We believe, then, that the study of these governing communities of practice or action arenas provides an important place to focus administrative, political, and empirical attention.

It is assumed by those who advocate for the application of performance measurement to governance networks that this exercise, when done effectively, may ensure that the resources devoted to them are being used wisely. Performance

Table 10.1 Performance Measurement Considerations by Accountability Type

<i>Accountability Type</i>	<i>Performance Management Questions</i>	<i>Critical Concerns</i>
Elected representative	<ul style="list-style-type: none"> • How and to what extent do elected officials place value on certain measures over others? • When might political considerations override the implications drawn from analyzing performance data? 	<ul style="list-style-type: none"> • “Elected officials are rarely interested in performance information” (Moynihan, 2008, p. 12). • Performance data may be politicized and interpreted to suit a predetermined policy frame (Frederickson and Frederickson, 2006).
Citizen/collective interests	<ul style="list-style-type: none"> • How and to what extent do citizens and other interest groups place value on certain measures over others? • What technical skills and shared mental models do citizens need to comprehend performance data? 	<ul style="list-style-type: none"> • Citizens are also rarely interested in performance information, particularly information relating to higher levels of government (Moynihan, 2008, p. 63). • Performance data may be politicized and interpreted to suit a predetermined policy frame. • Citizens may ascribe accountability to the wrong actors (Van Slyke and Roch, 2004).
Legal	<ul style="list-style-type: none"> • How might performance data be used to bring about legal compliance? • To what extent can network actors be held legally accountable for poor performance? 	<ul style="list-style-type: none"> • Enforcing contract law is costly (Cooper, 2003). • Many instances of network governance are not premised on contract law.
Owner/shareholder	<ul style="list-style-type: none"> • How and to what extent does profit trump all other possible performance indicators? 	<ul style="list-style-type: none"> • Owners may be less than forthright in publicly stating their performance goals when engaged in a grant and contract agreement or PPP.

Table 10.1 Performance Measurement Considerations by Accountability Type (continued)

<i>Accountability Type</i>	<i>Performance Management Questions</i>	<i>Critical Concerns</i>
Consumer	<ul style="list-style-type: none"> • How and to what extent do consumers take performance data into consideration? • What technical skills and shared mental models do they need to comprehend performance data? 	<ul style="list-style-type: none"> • Consumers' interests in performance data do not extend beyond consideration of themselves or their households.
Bureaucratic	<ul style="list-style-type: none"> • Who determines which measures count? Who collects and analyzes data? • Who shoulders the burden (e.g., the transaction costs) of data collection and reporting? 	<ul style="list-style-type: none"> • Failure to cut off funding due to lack of reporting of performance data (Frederickson and Frederickson, 2006, p. 60). • "Performance measurement may be used to attempt to give administrative answers to inherently political questions" (Frederickson and Frederickson, 2006, p. 172).
Professional	<ul style="list-style-type: none"> • How and to what extent do professional standards shape the choice of which performance indicators matter? 	<ul style="list-style-type: none"> • Multiple professional lenses may be evident within the network. • Professionals may be distanced from actual decision making (Romzek and Dubnick, 1987).
Collaborator	<ul style="list-style-type: none"> • How do peers and partners agree on which performance indicators matter? • Who shoulders the burden (e.g., the transaction costs) of data collection and reporting? 	<ul style="list-style-type: none"> • "Reasonable people may disagree about which results to measure" (Page, 2004, pp. 591–592). • Collaborators "are especially unlikely to find acceptable units of comparison across different types of programs" (Moynihan, 2008, p. 97). • Conflicts over performance measures may break down trust.

1. *Create an MPO committee that addresses performance measurement.* The process of developing and implementing performance measures requires a commitment of time and resources. One way to acknowledge this reality from the outset is to plan for a sustained group of practitioners devoted to the complex tasks of selecting measures, identifying data sources and tools, and deciding the best frequency of analysis and distribution of performance findings.
2. *Discuss what measures are ideal and use them to motivate data and tool development.* Given the rapid evolution of automated travel data collection technology, it is helpful to discuss performance measures beyond those that are supported by current capabilities. As one element of a performance measurement effort, transportation agencies within a region may jointly wish to define the most appropriate measures and associated data needs.
3. *Build performance measurement into traveler information programs.* A number of regions have developed systems to provide the public with real-time information on the condition of the transportation system (e.g., location and severity of delays, location and status of accidents, status of the transit network, weather-related traffic problems, disruptions from special events).
4. *Develop a regular performance report.* Many transportation agencies are reporting transportation performance measures on a regular basis. Even a very simple report providing one or two performance measures can have a positive effect on broadening the discussion over investment priorities.
5. *Involve managers with day-to-day responsibility for operations in the process of developing performance measures.* Agencies responsible for major investment decisions often take the lead in developing performance measures. However, it is critical that this process involves practitioners who are concerned primarily with day-to-day operations of the transportation system.

Figure 10.4 Federal Highway Administration Performance Management System Guidelines.

measures may be one way to guard against the proliferation of ineffective networks and may lead to improvements in public policy outcomes, deepen citizen engagement, provide for some measure of transparency, ensure that accountability exists within and across the network, provide for the equitable distribution of power, and sustain effective networks (Bovaird and Löffler, 2003, p. 322).

In the end, Moynihan reminds us that “performance data, or simplified assessments of performance data, fails to tell us: Why performance did or did

not occur?” (2008, p. 104). He concludes, “There is likely to be no single definitive approach to (a) interpreting what performance information means and (b) how performance information directs decisions” (2008, p. 102). These important caveats suggest that focusing on performance management systems cannot, nor should not, replace larger and perhaps more tacit accountability considerations. To overemphasize performance management and measurement serves to perpetuate an oversimplification of what performance management is capable of delivering on. This is why we suggest that performance management systems be viewed as an important, but not exclusive, component of a governance network’s hybridized accountability regime.

Applications

In the next section, several empirical studies are highlighted that examine the role and use of performance measures in the governance of governance networks. In Application P the integration of performance measures into traffic congestion management networks within four different metropolitan areas is studied. Following on the theme of managing traffic congestion, Application Q examines how metropolitan planning organizations (MPOs) use internally and externally defined and monitored performance measures. Finally, Application R examines the role of measurements and indicators within the context of global climate change mitigation efforts.

APPLICATION P: INTEGRATING PERFORMANCE MEASURES INTO TRAFFIC CONGESTION MANAGEMENT NETWORKS

Koliba, C., Campbell, E., and Zia, A. (2011). Performance measurement considerations in congestion management networks: Evidence from four cases. *Public Performance Management Review*, 34(4), 520–548.

Abstract

The central research question in this article asks how performance management systems are employed in interorganizational governance networks designed to mitigate traffic congestion. Congestion management networks (CMNs) are interesting for adopting performance

management systems across regionally bound networks of state, regional, and local actors; and within these networks, performance data are often assumed to be directing policy strategy and tool selection. Drawing on existing frameworks for categorizing performance measures and policy strategies used within congestion management networks, the authors present data from case studies of four regional networks. The CMNs studied here were indelibly shaped by the funded mandates of the USDOT with guidance from the major transportation reauthorization bills since the early 1990s. No uniform performance management system exists in the regional CMNs that were studied. Rather, the CMNs' performance management systems are a construct of discrete and overlapping performance management systems. Making comparisons more difficult, CMN performance measures are tied to multiple policy domains. Left unanswered are questions relating to the collection and analysis of performance data in terms of administratively and politically driven process dynamics and the extent to which congestion management is ultimately the policy frame that drives action in these networks. Some suggestions are offered that may lead to the answering of these questions through further empirical inquiry and modeling.

Methods

Comparative case study analysis; source document analysis; interviews

In another example highlighting the role of governance networks in managing urban environments, this comparative case study analysis conducted by Koliba, Campbell, and Zia (2011) focuses on the role that performance management systems (Moynihan, 2008) play in the management of traffic congestion in four different metropolitan centers across the United States: San Diego, Dallas-Fort Worth, Minneapolis-St. Paul, and Orlando. Figure P.1 presents another way to visualize the congestion management governance networks across these cases.

The range of performance measures that are used by these congestion management networks are listed in Table P.1. These measures are grouped into the causes, rates, and impacts of traffic congestion. These measures also include the anticipated impacts of congestion mitigation efforts.

Traffic congestion management has some of the most sophisticated performance management systems for measuring and monitoring traffic congestion. Table P.2 lays out how each region possesses multiple PMSs. Each of these PMSs uses one of several data collection formats.

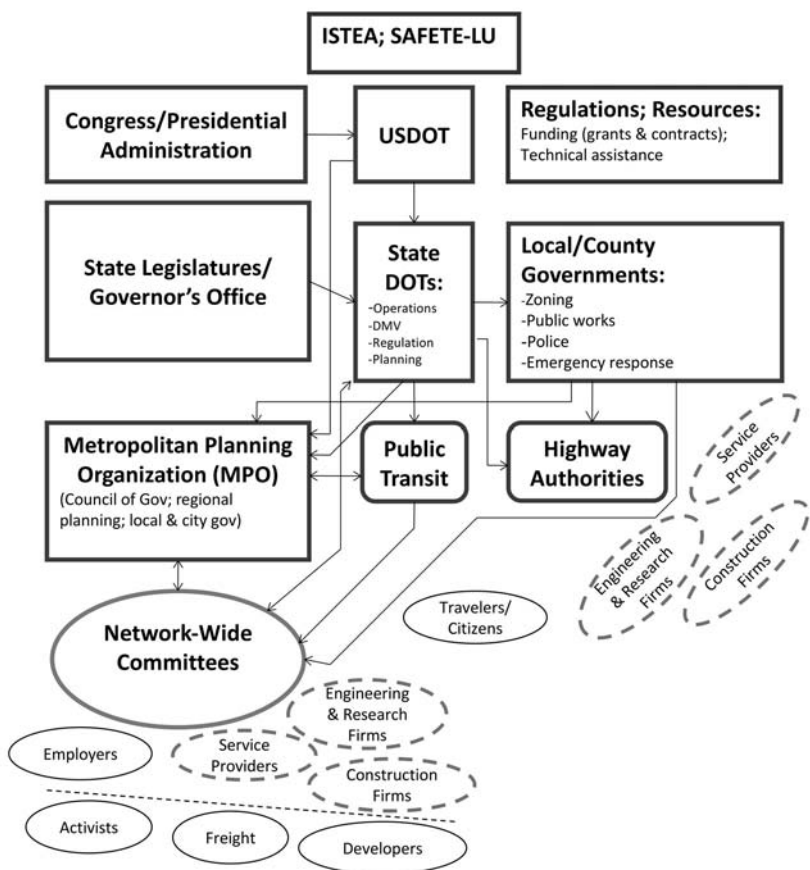


Figure P.1 Conceptual Model of a Metropolitan Congestion Management Network.

The main actors in this network are connoted by the rectangular boxes and include the United State Department of Transportation (USDOT), state-level Departments of Transportation, and metropolitan planning organizations (MPOs). A variety of other actors including public transit agencies, highway authorities, commuters, and engineering firms are included. Reproduced with permission: Koliba, C., Campbell, E., and Zia, A. (2011). Performance measurement considerations in congestion management networks: Evidence from four cases. *Public Performance Management Review*, 34(4), 520–548.

In Table P.1, below, measures are grouped by sub-category and representative measures. Adapted from Koliba, C., Campbell, E., and Zia, A. (2011). Performance measurement considerations in congestion management networks: Evidence from four cases. *Public Performance Management Review*, 34(4), 520–548.

Table P.1 Congestion Measures Used across these Cases

Category of Measure	Sub-category	Representative Measures
Causes of Congestion	Limited capacity: bottlenecks	Number of lanes; width of lanes; number of mergers
	Traffic incidents	Number of incidents; length of time to clear debris, etc.
	Work zones	Reduction in number of lanes; number of temporary closures
	Weather	Correlations between weather and congestion rates
	Traffic control devices	Degree of backup at traffic signals/signs
	Special events	Correlations between special events and congestion rates
	Rush hour/commute time	Correlations between commuting patterns and congestion rates
	Too many vehicle miles traveled	Public transit ridership
Rates of Congestion	Highway capacity manual measures, queuing-related measures, travel time-based measures, reliability measures	Volume/capacity; Roadway Congestion Index (RCI); Travel Time Index (TTI); level of service; buffer index; total congestion delay
Impacts of Congestion	Environmental: air quality	Smog levels, reduction in VMT
	Environmental: noise levels	Decibel levels
	Environmental: water quality	Water run-off patterns/contents
	Climate change: carbon emissions	Fossil fuel consumption levels; Comprehensive Modal Emissions Model
	Land use	Land use metrics
	Economic: trucking	Costs of congestion: value of added transit time; changes in reliability; buffer index

Table P.1 Congestion Measures Used across these Cases (continued)

<i>Category of Measure</i>	<i>Sub-category</i>	<i>Representative Measures</i>
<i>Impacts of Congestion</i>	Economic: individual business	Costs of congestion: the costs of remaining open for longer hours to process late deliveries; penalties or lost business revenue associated with missed schedules; costs of spoilage for time-sensitive, perishable deliveries; costs of maintaining greater inventory to cover the undependability of deliveries; costs of reverting to less efficient production scheduling processes; the additional costs incurred because of access to reduced markets for labor, customers, and delivery areas; changes in reliability; buffer index
	Economic: households	Costs of congestion: cost of commute in terms of time (opportunity costs) and money (fuel costs; car maintenance costs); travel time reliability; buffer index
	Economic: regional economy	Costs of congestion: diminished cost competitiveness and market growth opportunities; the redistribution of business to outlying areas.
	Quality of life	Changes in reliability
	Expand capacity	Rates of congestion; length of new roadway, new lanes, shoulders constructed; primary measures of benefit examined are traveler delay, travel times, and/or travel speeds, depending upon the specific measures examined in each study.
<i>Impacts of Congestion Management Strategies</i>	Reduce/cap capacity	Rates of congestion
	Manage existing capacity	Rates of congestion; HOV lane usage; changes in traffic patterns; primary measures of benefit examined are traveler delay, travel times, and/or travel speeds, depending upon the specific measures examined in each study; changes in reliability
	Manage demand	Percentage reductions in VMT; number of telecommuters; number of alternative work schedules; changes in traveler perceptions/attitudes
	Promote multi-modality	Maximum load factors (e.g., ratio of passenger-miles to seat-miles); public transit ridership; bike path and pedestrian walkway usage; park and ride usage; changes in reliability

Table P.2 Performance Management Systems in Four Congestion Management Networks

	<i>Performance Management System</i>	<i>Data Collection Formats</i>	<i>Notes</i>
San Diego	Freeway Management System	Real time	Cameras, signal status, vehicle sensors
	Freeway Performance Monitoring System	Real time	State-wide data collection developed by PATH and UC Berkeley
	Arterial Traffic Management Systems	Real time	Signal timing
	Transit Management Systems	Real time Compilation of statistics	PM related to transit system
	Traveler Information Management System	Real time	Real time transit data
	Trip Reduction Ordinance	Compilation of statistics	Provides local governments with standard measures/tools
	Integrated Corridor Management	Compilation of statistics	Shared across transit systems, Caltrans, HW Patrol
	SANDAG annual reports	Compilation of statistics Modeling and forecasts	
	Caltrans	Real time Modeling and forecasts	Loop detectors Traffic counts

This table compares the PMs by examining how data is collected, with particular notes regarding the role of remote sensing and other forms of data collection processes. Table adapted from Koliba, C., Campbell, E., and Zia, A. (2011). Performance measurement considerations in congestion management networks: Evidence from four cases. *Public Performance Management Review*, 34(4), 520–548.

Table P.2 Performance Management Systems in Four Congestion Management Networks (continued)

	<i>Performance Management System</i>	<i>Data Collection Formats</i>	<i>Notes</i>
Dallas-Fort Worth	Transportation Improvement Program (TIP)	Compilation of statistics	Monitors overall congestion rates; early scoping phases . . .
	Thoroughfare Assessment Program	Real time Modeling and forecasts	Signal integration and monitoring
	National ITS: used by Texas DOT and DART (transit) Traffic Management Centers	Real time Modeling and forecasts	Uses satellite data; closed-circuit TV; highway sensors
	Transportation: "State of the Region" reports	Compilation of statistics	
	Dallas-Fort Worth Regional Travel Model	Modeling and forecasts	Facilitated by NCTCOG
	Regional Arterial System	Real time Compilation of statistics	
	Intermodal/Freight System	Forecasts	
	Texas DOT data collection	Real time	Pneumatic tubes
	NCTCOG data collection	Compilation of statistics Modeling and forecasts	Aerial photography Project-specific evaluations

Minneapolis-St. Paul	Arterial Management System	Real time	Cameras; signal optimization systems
	Regional Transportation Audit	Compilation of statistics	Performed by Met Council
	Mn/DOT data collection Met Council data collection	Compilation of statistics Real time	Standardized congestion measure—MN/DOT and Met Council; traffic flow per hour
	Metropolitan Freeway System Congestion Report	Compilation of statistics	Written by MN/DOT
Orlando	Traffic Operations Group—out of FDOT—Traffic Incident Management teams	Real time After action reports	Response actions; after action reports
	Expressway Management System	Real time	Uses cameras; travel times
	Traffic Signal Report Card	Compilation of statistics	Uses data to demonstrate success of signal timing
	Surface Transportation Security and Reliability Information System Model Deployment	Modeling and forecasts	
	Texas Transportation Institute report	Compilation of statistics	Discussed by Metroplan staff and Policy Board
	Central Florida Consortium	Central data hub	12 local and regional partner agencies
	iFlorida	Real time Modeling and forecasts	Expressway Authority collects data
	Tracking the Trends report	Compilation of statistics	Done annually by Metroplan
	M&O subcommittee	Compilation of statistics Modeling and forecasts	Uses incident indicators—used to use LOS Asks: are we making the right investments?
	Metroplan initiates	Citizen surveys	Metroplan

Some key findings and advances stemming from this study include:

- Uses comparative case studies of congestion management networks in three metropolitan areas. Develops conceptual model of traffic congestion management networks (Figure P.1).
- Identifies core performance measures and indicators used by these networks (Table P.1) and the types of performance management systems in place to align performance goals and strategic, tactical, and operational tasks.
- Some conclusions drawn:
 - o The measurability of traffic congestion contributes to the relative homogeneity of shared mental models around the causes and consequences of traffic congestion between actors in the network.
 - o The role of the federal government is a driver of performance management development in these networks.
 - o There is some heterogeneity in the intra-network performance management systems employed across each case.
 - o Some level of a “culture of performance” is evidenced across these cases.
 - o There is a need to understand how congestion goals compete or align with a variety of other policy goals.

APPLICATION Q: PERFORMANCE MANAGEMENT SYSTEMS IN METROPOLITAN TRANSPORTATION PLANNING NETWORKS

Zia, A., Koliba, C., Meek, J., and Schulz, A. (2015). Scale and intensity of collaboration as determinants of performance management gaps in polycentric governance networks: Evidence from a national survey of MPOs. *Policy & Politics*, 43(3), 367–390.
<http://dx.doi.org/10.1332/030557315X14352341137386>

Abstract

MPOs present a unique opportunity as real-world laboratories to investigate the dynamics of scale and performance management in polycentric governance networks. Using a 2009 Government Accountability Office survey of all 381 MPOs, this study examines whether the scale and intensity of collaboration of an MPO influences performance management and tests two hypotheses: (1) Small-scale MPOs have a significant performance management gap; (2) Larger-scale MPOs with higher scale and intensity

of collaboration have a smaller performance management gap. Regression models predict performance management gaps across 15 indicators. Theoretical implications concerning scale and collaboration in polycentric governance networks are discussed.

In the United States, metropolitan planning organizations (MPOs) sit at the center of governance networks that are responsible for planning and oftentimes maintaining regional transportation infrastructure. In essence, they are true “network administrative organizations” (NAOs) (Provan and Kenis, 2008). To illustrate how MPOs use and are impacted by performance measures, Zia et al. (2015) draw on a survey of MPOs from across the United States conducted by the GAO to find any perceived gaps in performance management systems.

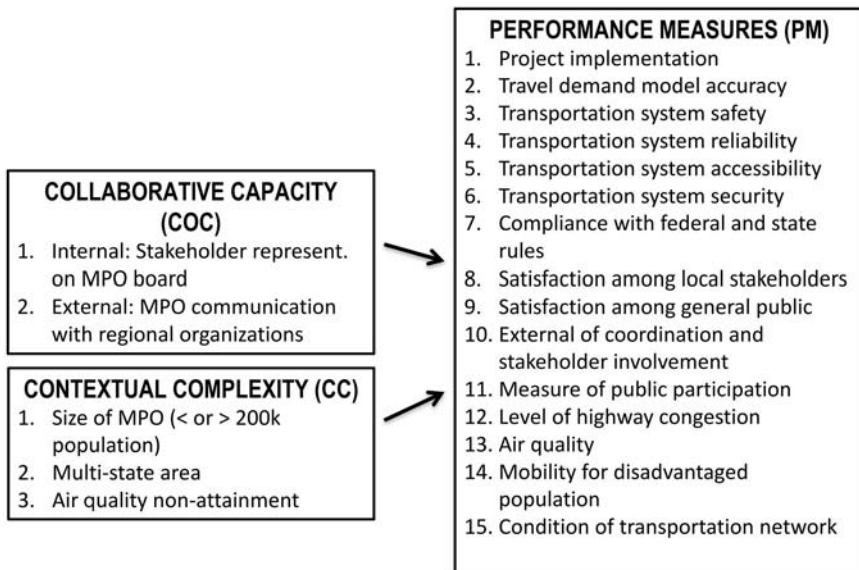


Figure Q.1 Logistic Regression Model Design: Contextual Complexity, Administrative Structure, Collaborative Capacity, Capacity Challenges and Performance.

This figure lays out the inferred relationship between five sets of variables: contextual complexity, administrative structure, collaborative capacity, technical capacity, and capacity challenges, and their correlation pertaining to perceptions of performance measures. Figure does not appear in original article.

Figure Q.1 provides an overview of the logistic regression model for this study. It shows the types of relationships that were tested between five sets of dependent variables upon a series of performance measures. This study highlights the relationship between MPO capacity, the capacity of an MPO's broader networks, and perceptions of the PMS in place. A "performance management gap," which is manifested as the differences between what performance data is collected and what performance data is valued, is studied.

In this study two hypotheses were tested: H1: Small-scale MPOs have a significant performance management gap compared with large-scale MPOs in the U.S.; and H2: The performance management gap is inversely affected by the scale of MPOs as polycentric governance networks; that is, larger-scale MPOs with higher scale and intensity of collaboration have a smaller performance management gap. The study findings suggest that perceptions regarding which performance measures matter is predicated on the size of the MPO region. In addition, the collaborative capacity as an MPO is correlated to perceptions of the persistence of a performance management gap. In other words, this study found that those MPOs with greater networked, collaborative capacity were better able to collect and measure performance measures that were of importance to them.

Some key findings and advances stemming from this study include:

- GAO 20—Metropolitan Planning Organization survey was used to model the relationship between MPO demographic, environmental, and internal and external network capacities and its perceptions of meeting performance expectations.
- Spatial scale variables, Scale and Intensity of Collaboration variables, and perceived capacity challenges and performance measurement gaps are included in the model.
- An Intensity of Collaboration Index is posited based on the representation of vertical and horizontal stakeholders in the governing boards of MPOs.
- OLS regression models were run correlating independent variables with the dependent variable of perceptions regarding MPO capacity to meet specific types of performance indicators.
- Recognition of a "performance gap" between small and large MPOs, and between those with higher levels of collaborative capacity and those with lower levels of collaborative capacity.

APPLICATION R: PERFORMANCE AND ACCOUNTABILITY IN GLOBAL CLIMATE GOVERNANCE NETWORKS

Zia, A., and Koliba, C. (2011). Accountable climate governance: Dilemmas of performance management across complex governance networks. *Journal of Comparative Policy Analysis*, 13(5), 479–497.

Abstract

How can accountability be institutionalized across complex governance networks that are dealing with the transboundary pollution problem of mitigating greenhouse gas emissions at multiple spatial, temporal, and social scales? To address this question, we propose an accountability framework that enables comparison of the democratic, market, and administrative anchorage of actor accountability within and across governance networks. A comparative analysis of performance measures in a sample of climate governance networks is undertaken. This comparative analysis identifies four critical performance management dilemmas in the areas of strategy, uncertain science, integration of multiple scales, and monitoring and verification of performance measures.

Methods

Source document analysis; participant observation; interviews

The capacity of the Earth's nations to band together to mitigate global climate change is, not surprisingly, predicated on the abilities of sovereign governments to work together to agree on a path forward and to comply with goals set within international treaties, specifically, the United National Framework Convention on Climate Change (UNFCCC).

In a comparative analysis of the different types of ten distinct governance networks operating in this sphere, Zia and Koliba found that some of these networks involved all private and nonprofit sector actors, others all public sector actors, and still others comprised of public and private sector actors. In Table R.1, these ten networks are displayed.

Table R.1 Performance Measures (Activities and Expected Outcomes) and their Deadlines across Different Climate Change Governance Networks

Type of Governance Network	Example from Climate Governance Network	Performance Measures	
		Activities and Expected Outcomes	Deadlines
Private-Private	ICCP	Address continued growth of greenhouse gas emissions through mechanisms such as emissions trading. Business and industry expertise are important parts of this process. Technological innovation is crucial.	Vague
	3C	Businesses cooperate to reduce emissions for a stable climate by putting a price on carbon emissions, setting minimum efficiency standards, encouraging sustainable forestry and agriculture, and pushing low carbon technologies.	Vague
Public-Public	UNFCCC	Countries coming together to consider what can be done to reduce global warming and to cope with whatever temperature increases are inevitable. The Kyoto Protocol sets binding targets for 37 industrialized countries and the European Community for reducing greenhouse gas emissions by an average of 5% against 1990 levels over a five-year period. Kyoto mechanisms include emissions trading, Clean Development Mechanism (CDM) and Joint Implementation (JI).	Reductions must be met over the five-year period 2008–2012.
	APP	Overall goal is to accelerate the development and deployment of clean energy technologies. There are sub-goals regarding energy security, national air pollution reduction, and climate change. The partnership will focus on expanding investment and trade in cleaner energy technologies, goods and services in key market sectors.	Vague

Public-Private	<p>CDM Yiyang Xiushan Hydropower Project, P.R. China</p> <p>Casa Armando Guillermo Prieto—Wastewater treatment facility for a Mezcal distillery Heilongjiang Chemical N₂O Abatement Project</p>	<p>Reduce CO₂ emissions by 243,043 metric tons per year by using a consolidated methodology for grid-connected electricity generation from renewable sources.</p> <p>Reduce CO₂ emissions by 15,153 metric tons per year by using thermal energy with or without electricity and methane recovery in wastewater treatment.</p> <p>Reduce CO₂ emissions by 279,319 metric tons per year by implementing catalytic reduction of N₂O inside the ammonia burner of nitric acid plants.</p>	<p>Crediting period of 05/10/09–05/09/16 with lifetime of project lasting 33 years from 08/18/05</p> <p>Crediting period of 05/07/09–05/06/16 with lifetime of project lasting 25 years from 4/23/07</p> <p>Crediting period of 05/07/09–05/06/16 with lifetime of project lasting 21 years from 07/17/07</p>
	<p>II Timisoara Combined Heat and Power Rehabilitation for CET Sud location Debrecen landfill gas mitigation project Revamping and modernization of the Alchevsk Steel Mill</p>	<p>Upgrade the existing heat production plant CET Timisoara Sud with cogeneration capacity. Installation and operation of a new landfill gas collection system to capture and flare the methane content of the landfill gas.</p> <p>Reduction in CO₂ emissions by 413,866 metric tons over crediting period.</p> <p>Replacement of technology and upgrade of all major components of iron and steel making and finishing processes. The goal is to improve environmental performance, and increase capacity and competitiveness.</p>	<p>Project lifetime is 20 years as of September 2005</p> <p>Crediting period of 01/01/08–12/31/12, with lifetime of project lasting 10 years from 11/30/07</p> <p>Crediting period of 01/01/08–12/31/12, with lifetime of project lasting 40 years from 08/24/05</p>

This table includes each network's mix of public and private sector actors, as well as the types of performance measurements used by each network. Adapted from Zia, A., and Koliba, C. (2011). Accountable climate governance: Dilemmas of performance management across complex governance networks. *Journal of Comparative Policy Analysis*, 13(5), 479–497.

This study draws on the governance network accountability framework presented in Chapter 9 and looks at how each network defines the measures in place to ensure goal compliance. These performance measures serve as the explicit standards of accountability. The deadlines put in place to hold members accountable are identified.

Zia and Koliba discuss the challenges facing these networks as they attempt to control the volume of greenhouse gas emissions. These challenges are framed as a series of dilemmas: the dilemma of strategy; the dilemma of uncertain science; the dilemma of integration of multiple time-space scales; and the dilemma of monitoring and verification. These factors are used to underscore the accountability and performance management challenges in this context.

Some key findings and advances stemming from this study include:

- Applies a network accountability framework to a comparison of climate change mitigation networks operating at the global scale. Political power, scientific knowledge and uncertainty, and the value of equity are found to mix differently and set up a dynamic between rich and poor countries.
- A description of network type, performance measures, and deadline expectations is provided (see Table R.1)
- A series of accountability dilemmas are surfaced:
 - o Dilemmas of strategy
 - o Dilemmas of uncertain science and how to incorporate scientific uncertainty into policy design
 - o Dilemmas pertaining to the integration of multiple temporal and spatial scales
 - o Dilemmas of monitoring and verification of performance benchmarks

Note

1 Thinkexist.com

Chapter 11

Meso Level Theories for Governance Network Analysis

Each man is always in the middle of the surface of the earth and under the zenith of his own hemisphere, and over the centre of the earth.

—Leonardo da Vinci¹

We dance round in a ring and suppose, but the secret sits in the middle and knows.

—Robert Frost²

With the exception of the last two chapters on accountability and performance, most of the ideas and concepts presented in this book have been discussed outside of the critical question of why specific networks are structured the way they are and function the way they do. To help to provide more theoretical richness and explanatory power, a number of theoretical approaches, traditionally situated outside of the literature on network governance, offer both context specific and cross-issue interpretations of governance networks. In this chapter, we survey some of the “meso” level theoretical approaches found within the public studies, political science, and planning fields that can provide conceptual and explanatory bridges between micro level interactions and macro level patterns of engagement found within the types of network configurations described in earlier chapters. Our use of the term “meso scale” or “meso level” refers to both intermediate or collective connective relations—between and among governance actors—that build connections among stakeholders.

We claim that these theories are readily combined with governance network analysis because they are “complexity friendly.” The theories found in this chapter tend to avoid reductionism, allow for emergence and path dependencies, and accommodate other system characteristics such as feedback and feedforward dynamics. We identify and describe those theories that hold considerable promise in developing a complexity friendly approach to governance networks. As we have noted in earlier chapters, these connections can take many forms: informal and formal, direct and indirect, resource and information exchange.

The Middle Way: Meso Level

As we noted in Chapter 7, complexity has always been a part of everyday public administration and policy practices (Klijn and Snellen, 2009, p. 17). Just as the field of physics “has discovered complexity by complicating its own language of description” (Tsoukas, 2005, p. 236), public administration and policy has come to complexity science in much the same way. Governance networks organized around the framing of public problems, the deliberation of policy alternatives, and/or the implementation of public policies are complex social systems of a particular type. They are guided by dynamics that are governed by certain political and administrative practices undertaken by social and institutional agents representing a variety of public, private, and nonprofit sector organizations and interests. The meta-theoretical underpinnings of complexity theory, coupled with the computational tools and modeling capacity being utilized in complexity science (see Chapter 12 for a discussion of some of these tools), provides the field of public administration and policy studies with a growing capacity to employ this language to study observable governance phenomena. In this chapter, we discuss how the language and science of complexity may be combined with some of our existing “complexity friendly” policy and governance theoretical approaches to support the empirical study, analysis, and modeling of governance networks.

A set of complementary meso-scale theories has evolved outside of the network governance literature that have been used to answer compelling empirical questions regarding the relationship of coalition formation and policy development; the role of institutional rules in structuring human interaction; the role of network ties in achieving particular policy goals; the role of feedback and equilibrium in the formation and implementation of public policies; and the coupling of policy streams. The most widely known and respected framework is the Institutional Analysis and Development (IAD) framework first developed by Nobel Laureate Elinor Ostrom (2005). The IAD framework draws on institutionalism and neo-institutionalism theories, game theory, transaction cost theory, and common resource pool theory to craft a description of multi-institutional systems that explains the crafting of public policy as ultimately an

institutional design problem in complex “action arenas.” Ostrom (2005) emphasizes the roles that rules play in structuring governance arrangements. Drawing on her empirical analysis of natural resource management networks she makes a compelling argument in favor of more decentralized concentrations of power and authority to enhance performance in some institutional contexts and conditions. Other comprehensive frameworks may be found in John Kingdon’s multiple streams framework (1984), Baumgartner and Jones’s policy subsystem and punctuated equilibrium framework (1993), and Paul Sabatier and associates’ advancement of the Advocacy Coalition Framework (Sabatier and Jenkins-Smith, 1993). We include William Gormley’s Salience and Complexity Model, and most recently Kania and Kramer’s packaging of network and systems concepts into a “collective impact” framework. Recent works by Eric Hans Klijn and Joop Koppenjan (2015) and Robert Agranoff (2012) that focus on managing governance networks through collaboration are also featured in this chapter.

Before venturing into more detail about these important meso level theoretical advances, we need to acknowledge the limits of our review. A number of critical theoretical advances not covered in this chapter, but which deserve attention, include the “Ecology of Games” approach to governance (Dutton, 1995; Lubell, 2013), the democratic policy design and social construction framework (Ingram and Schneider, 1993), institutional isomorphism (DiMaggio and Powell, 1991), policy innovation and diffusion models (Berry and Berry, 1999), and institutional collective action (Feiock, 2013). These and doubtlessly other theoretical contributions are amendable to governance network analysis.

Multiple Policy Streams

One of the most important theories of policy process has been Jon Kingdon’s policy stream model. The policy stream model, Figure 11.1, does not assume the linearity of simple cause and effect, nor rational behavior on the part of policy actors. Problems, policies, and politics streams may couple, and in fact, need to couple for agendas to be set and policy windows to open. Kingdon recognizes that policy streams are created and directed through networks and indirectly asserted that networks form within individual streams, and provide a basis for the coupling of streams (1984). Kingdon recognizes that a number of policy actors, including interest groups, academia, media, and political parties, coordinate actions within and across the policy stream. He grounds the policy stream model in the coordinated actions that arise during the pre-enactment phases of policy selection and design, although we may recognize the coupling of streams across all facets of the policy process.

Zahariadis observes that, “Much like systems theory, [policy stream theory] views choice as the collective output formulated by the push and pull of several

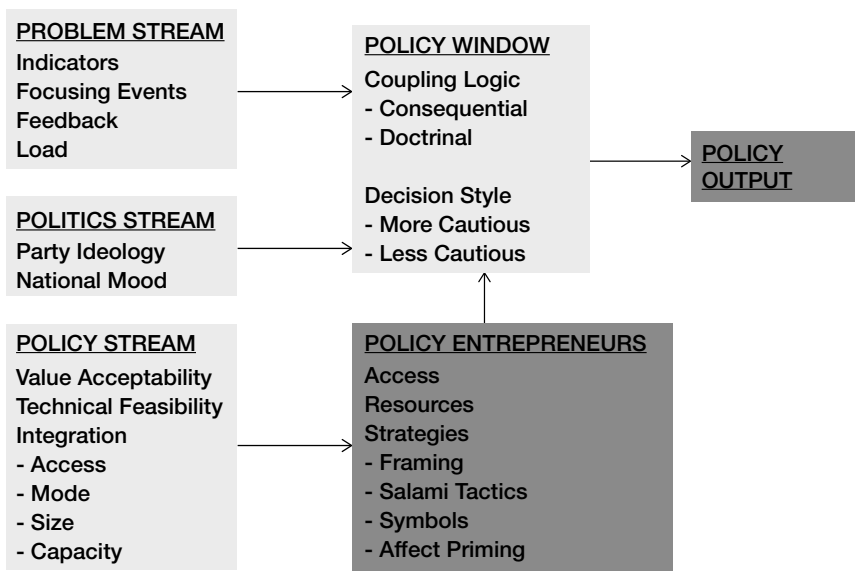


Figure 11.1 Structural Features of the MPS Framework.

(Adapted from Kingdon, 1984). Modified from Koliba, C., and Zia, A. (2013). Complex systems modeling in public administration and policy studies: Challenges and opportunities for a meta-theoretical research program. In L. Gerrits and P. K. Marks (Eds.), *COMPACT I: Public administration in complexity*. Litchfield Park, AZ: Emergent Publications.

factors . . . It shares common ground with chaos theories in being attentive to complexity, in assuming a considerable amount of residual randomness, and in viewing systems as constantly evolving and not necessarily settling into equilibrium (Kingdon, 1984, p. 219)” (2007, p. 66). The extent to which problem, policy, and politics streams are coupled is something that studies of governance networks can shed light on. This is because coupling of policy streams comes about through a generative process of interlocking feedback loops occurring across each stream.

Governance networks are mobilized within and across each stream. Some actors span more than one stream—for example, a legislator may become convinced of the importance of a particular problem or policy solution and work to align the politics stream with a particular problem definition or policy tool. Therefore, the kind of boundary spanning activities that can be carried out by network actors (see Chapter 8) serve a critical function in ensuring that public policies are effectively studied and mitigated.

Kingdon’s policy stream model aligns with the stage heuristic policy process described in Chapter 6. The policy functions outlined in Figure 11.1 map on

directly to a policy stream. Integrating studies of governance networks with policy streams allows us to understand the role of networks unfolding within a dynamic process.

The role of policy entrepreneurs as exploiters of structural holes in governance networks is an important area of future research. The rise of social media and information warfare campaigns across politics streams can provide important data sources to uncover network dynamics fueled by policy entrepreneurs.

Punctuated Equilibrium

A second major theoretical framework to draw upon to better understand network dynamics and dynamism is Baumgartner and Jones's punctuated equilibrium framework. This notion of punctuated equilibrium was first posited by paleontologists Niles Eldredge and Stephen Jay Gould (1972). Punctuated equilibrium in a policy and social system context is predicated on the assumption that, "... policymaking both makes leaps and undergoes periods of near stasis as issues emerge on and recede from public agenda" (True, Jones, and Baumgartner, 2007, p. 157). This view of policy subsystems draws extensively from an understanding of nonlinear system dynamics. Their theory fits most directly with system dynamics models because of its reliance on feedback loops as a critical feature of subsystem dynamics.

The key features of interest concern the relationship between policy subsystems in punctuated equilibrium theory. This theory assumes that,

Political systems, like humans, cannot simultaneously consider all the issues that face them, so policy subsystems can be viewed as mechanisms that allow the political system to engage in parallel processing (Jones, 1994). Thousands of issues may be considered simultaneously in parallel within their respective communities of experts. This equilibrium of interests does not completely lock out change. Issue processing within subsystems allows for a politics of adjustment, with incremental change resulting from bargaining among interests and marginal moves in response to changing circumstances.

(True, Jones, and Baumgartner, 2007, pp. 158–159)

Much like the Advocacy Coalition Framework (ACF) (discussed later), punctuated equilibrium theory recognizes the role that certain actors or combinations of actors play in establishing system-wide equilibrium. These entanglements of subsystems are more than likely comprised of stable sets of institutional actors and rules. However, these same actors will likely produce "a plethora of small accommodations and a significant number of radical departures

from the past” (True, Jones, and Baumgartner, 2007, p. 156). The ranges of small, short-term accommodations and long-term radical departures from the stable state must be placed within the context of the system as a whole. Those using punctuated equilibrium theory often rely on changes within the outputs or inputs of the whole systems over time to demonstrate phase transitions. Substantial deviations from the kind of variations attributable to small accommodations are noted. When radical changes to relatively stable patterns are noted, explanations are sought using system dynamics logic.

When studying governance networks, the notion of punctuated equilibrium can be used to explain the inherent stability of the network over time. When contexts change as a result of some internal or external forces (such as calls for greater accountability or enhanced performance) a governance network may adapt—alter its structure and/or functions. The factors and forces that hold the network in equilibrium may provide inertia or a counteracting feedback loop (most likely positive/reinforcing) that may resist change and try to maintain a certain, well worn path dependency. The idea of “bureaucratic inertia” is useful in this context.

Understanding how systems shift or phase transition from one steady state to another is critical to the effective governance of networks. Sometimes, phase transitions can occur as a result of major policy changes (such as the development of the European Union, the early development of the United Nations, or health care reform in the United States). The capacity of governance networks to effectively evolve to address such reforms can be a driving factor in their overall failure and success. The role of public opinion dynamics in explaining punctuated equilibria and tipping points in governance networks can also be emphasized here as an active area of ongoing and future research (Jones and Baumgartner, 2012).

Institutional Analysis and Development (IAD)

Another critically important complexity friendly theoretical framework is the Institutional Analysis and Development (IAD) framework put forth by Nobel Laureate Elinor Ostrom and her colleagues. Although there are many facets to Ostrom’s IAD framework, as shown in Figure 11.3, we highlight two of the major contributions it makes to the study of governance networks here. These two facets concern the role that “rules in use” and institutional rule making play in the structuring and functioning of these systems; and the “action arenas” through which these rules combine to structure action. As we noted in Chapter 3, Ostrom distinguishes between three types of rules: (a) *operational rules* that govern day-to-day activities of appropriators; (b) *collective choice rules*

concerning overall policies for governing common pool resources, public goods, and public-private contracts, and how those policies are made; and (c) *constitutional choice rules* that establish who is eligible to determine collective choice rules. The operational functions of any social system are governed by a complex array of operational rules, norms, habits, and customs. Collective choice theory has long been viewed as a central feature of resource exchange frameworks. Collective choice is shaped by individual and collective interests all needing to be balanced in order to create an optimal level of autonomy and dependence. A more comprehensive listing of the different types of institutional rules that Ostrom and her colleagues observed in the context of irrigation planning and control networks (2014) is found below in Figure 11.2.

Space precludes an in-depth discussion of each type of rule and how they emerge within any given governance network. As noted, these rules operate on various levels—hence some rules persist within one level, while others function across levels of jurisdiction and social scale. Some types of rules are more important or powerful than others. Ostrom is quite clear that constitutional rules that exist in almost all democratic or aspiring democratic countries trump all other rules, particularly as we focus on the policy functions of a governance network.

Ostrom has focused much of her attention on how rules in use shape social interaction. She cautions that such a focus is not easy. “The capacity of humans to use complex cognitive systems to order their own behavior at a relatively subconscious level makes it difficult at times for empirical researchers to ascertain what the working rules for an ongoing action arena may actually be in practice” (Ostrom, 2005, p. 19). The combining, commingling, and competition of rules operating at various levels can be modeled using system dynamics modeling. These dynamics are represented as “rules-in-use” in her model shown in Figure 11.3.

The extent to which these rules guide the behaviors of those social agents in the IAD framework is predicated on how authoritative they are. We have noted how the self-organizing capacity of autonomous agents is shaped by decision rules and relational scripts. According to Ostrom’s approach, self-organized governance systems “need to match rules that impose costs in a rough proportion to the likely positive payoffs that appropriators are likely to obtain over time . . .” (2005, p. 234). Ostrom’s emphasis on rational collective action is subject to the kind of critiques that have been raised regarding rational action more generally. Paul Pierson argues that, “. . . we should generally exercise considerable skepticism about assertions that institutional arrangements will reflect the skilled design choices of rational actors. Instead, we should anticipate that there will often be sizable gaps between the ex ante goals of powerful political actors and the actual functioning of prominent institutions” (Pierson, 2011, p. 15).

Boundary rules

- B1 Land: ownership or leasing of land within a specified location
- B2 Shares: ownership or leasing of shares, transferable independent of land, to proportion of water flow
- B3 Membership: belonging to a group required to receive water

Position rules

- P1 Rotation: water users rotate into monitor position
- P2 External monitor: hired guard from outside water user community
- P3 Local monitor: hired guard from inside water user community

Choice (Allocation) rules

- C1 Fixed percentage: the flow of water is divided into fixed proportions according to the land owned or some other formula
- C2 Fixed time slot: each individual (or subcanal) assigned fixed time during which water may be withdrawn
- C3 Fixed order: farmers take turns to get water in the order in which they are located on a canal (or some other clear assignment)

Information rules

- I1 Rule infraction: publicity announcement made in some public manner of rule breaking
- I2 Measurement: size of diversion weir publicly measured
- I3 Reporting: written minutes and financial reports available to all

Aggregation rules

- A1 Neighbor agreement: both farmers must be present and agree at time slot change
- A2 Community votes: time to change from one allocation rule to another
- A3 Monitor decision: if farmers disagree, monitor has the final word

Payoff rules

- Y1 Penalty: farmers obliged to contribute money, labor, or some other resource for breaking a rule
- Y2 Water tax: farmers pay an annual financial tax
- Y3 Labor obligation: farmers contribute labor (according to an agreed formula) for regular maintenance and emergency repair

Scope rules

- S1 Geographic domain: extent of land to which water may be applied
- S2 Water use: limits on use of water obtained from a system
- S3 Crops: limits on crops that may be grown using water from a system

Figure 11.2 Rule-in-Use Frequently Identified in Field Studies of Irrigation Systems.

Adapted from Ostrom, E. (2014). Do institutions for collective action evolve? *Journal of Bioeconomics*, 16(1), 3–30.

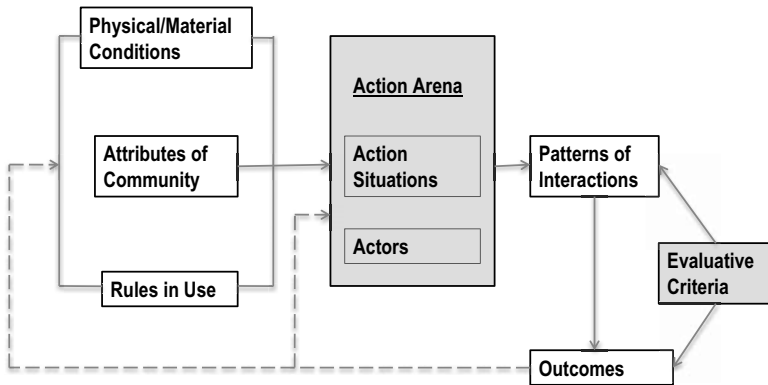


Figure 11.3 An Overview of IAD Framework.

(Adapted from Ostrom, 2007). Modified from Koliba, C., and Zia, A. (2013) Complex systems modeling in public administration and policy studies: Challenges and opportunities for a meta-theoretical research program. In L. Gerrits and P. K. Marks (Eds.), *COMPACT I: Public administration in complexity*. Litchfield Park, AZ: Emergent Publications.

A second major dimension of the IAD model concerns the role of “action arenas” as spaces where social agents commingle with institutional rules of many forms to generate certain activities or events. Complex policy and governance systems will likely be comprised of many action arenas, each of which plays somewhere between a minor to major role in determining the outputs of a whole system. Variation in the structures of these action arenas becomes a critical consideration in the IAD framework. Ostrom (2005) has argued, quite effectively, that the composition of these action arenas has a considerable impact on a system’s performance. The dynamics that unfold in strategic action arenas may be modeled using an agent-based modeling framework (Zia and Koliba, 2013, 2017). Complex interactions of different types of rules in use and formal rules within and across action arenas has resulted in fruitful research on polycentric governance networks (Ostrom, 2010; Zia et al., 2015).

Action arenas can be considered as subnetworks within wider whole networks. These action arenas are those critical subnetworks within which important decisions are made, actions coordinated, and systems steered. The importance of action arenas to the governance of networks in relation to the management of decision making within communities of practice was discussed in greater detail in Chapter 8. A focus on action arenas also provides an opportunity to better understand the “polycentricity” of governance that was first observed by Elinor Ostrom’s partner, Vincent Ostrom and his colleagues in 1961.

Advocacy Coalition Framework

Another critically important meso level, complexity friendly theory that is pertinent to governance networks is the Advocacy Coalition Framework (ACF). ACF accounts for some of the more qualitative and sociologically defined factors that support dynamic systems. The ACF fills an important gap in the theoretical landscape of governance networks for several reasons. ACF assumes, “(1) that belief systems are more important than institutional affiliation, (2) that actors may be pursuing a wide variety of objectives, which must be measured empirically, and (3) that one must add researchers and journalists to the set of potentially important policy actors (Sabatier and Jenkins-Smith, 1993)” (Sabatier and Weible, 2007, p. 5). The ACF, shown in Figure 11.4, relies heavily on the existence of advocacy coalitions that are organized around “common belief” networks. Presumably these coalitions share common mental models of problem definition and policy solutions, and share a political will to influence the creation and implementation of public policies. The extent to which an advocacy coalition possesses power over other coalitions is shaped by parameters, external events, and constraints and resources available to a policy subsystem. The framework operates on the basic premise of system dynamics: inputs shaping outputs with potential feedback loops shaping the nonlinear, recursive nature of the system. Those who have worked to advance the ACF have tended to downplay the role that institutional rules play in shaping the actions of the policy subsystem. Emphasis is placed on the influence that the advocacy coalitions operating within a subsystem play. The dominant drivers of coalition behavior are the “core beliefs” of coalition members.

The ACF accommodates network structures by allowing for the possibility to understand coalitions as collections of individual agents—each of whom contributes to the stability or instability of the coalition’s core beliefs. These agents have the capacity to influence one another. These influences are nonlinear. It is also possible to view individual advocacy coalitions as agents unto themselves, particularly in instances when they serve as critical action arenas.

Coalitions are characterized by the emergence of bottom-up influences. According to Sabatier and his associates, these bottom-up properties take precedence over top-down and externally driven institutional rules and norms (Sabatier and Weible, 2007).

The ACF represents more of a “kitchen sink” model of how dynamic governance networks operate. One will note the importance of stable parameters (or stable network or subnetwork structures or functions); the importance of externality and boundaries; the temporal dynamic of long- and short-term constraints and resources; and the structural and functional composition of what serves as the policy subsystem. These subsystems can, ultimately, be described and understood within the context of networks.

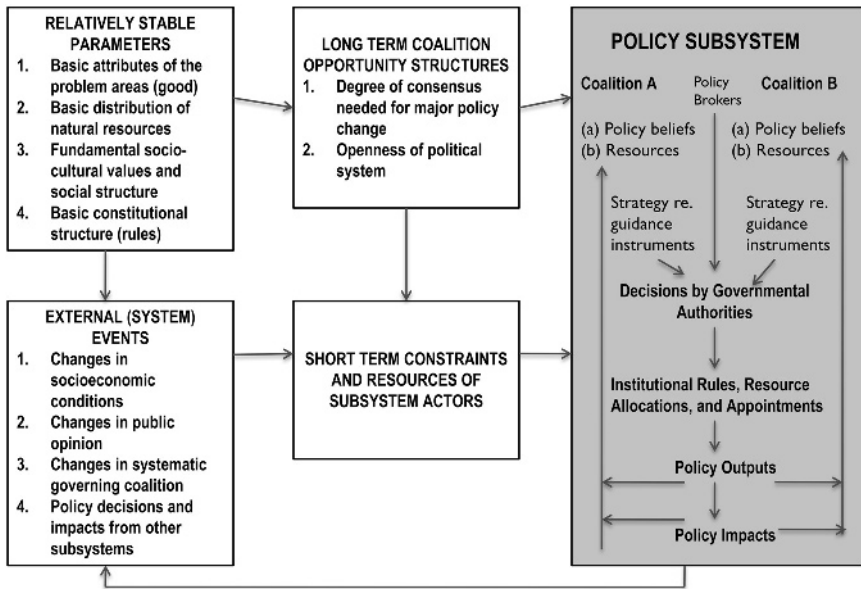


Figure 11.4 Advocacy Coalition Framework.

(Adapted from Sabatier and Weible, 2007). Modified from Koliba, C., and Zia, A. (2013). Complex systems modeling in public administration and policy studies: Challenges and opportunities for a meta-theoretical research program. In L. Gerrits and P. K. Marks (Eds.), *COMPACT I: Public administration in complexity*. Litchfield Park, AZ: Emergent Publications.

Salience and Complexity Model

William Gormley's Saliency-Complexity Model (S-C Model) (1986) was first introduced in the mid-1980s as a way to describe and categorize different regulatory systems. The S-C Model consists of a basic four square matrix juxtaposing the high to low degree of "issue saliency" against the high to low degree of technical complexity of any given regulatory regime. Gormley placed different regulatory regimes into one of these four boxes (see Table 11.1).

Gormley's model provides a useful framework for understanding how critical decisions are made around specific policy domains. In policy domains where technical complexity and the saliency of the public goods and services being delivered are low, street level bureaucrats and their lead government agencies manage network activities. When technical complexity is low, but issue saliency is high, public hearing forums are convened through formal courts or legislative hearings to set operating rules or rulings on specific cases. When issue saliency

Table 11.1 **Gormley’s Saliency-Complexity Model of Regulatory Systems**

	<i>Technical Complexity</i>		
<i>Public Salience</i>		Low	High
	Low	STREET LEVEL BUREAUCRATS <i>Standard operating procedures</i> <ul style="list-style-type: none"> • Election regulations • Building inspections • Billboard regulations • Food service inspections • Motor vehicle inspections 	BOARD ROOM <i>Economic motives</i> <ul style="list-style-type: none"> • Antitrust regulation • Cable television regulation • Securities and banking regulation • Transportation regulation
	High	HEARING ROOM <i>Electoral incentives and legal precedence</i> <ul style="list-style-type: none"> • Land use zoning regulation • Abortion • Affirmative action regulation • Gun control • Immigration regulation 	OPERATING ROOM <i>Professional norms and industry standards</i> <ul style="list-style-type: none"> • Powerplant siting • Electric utility regulation • Health care regulation • Water and air quality regulation • Hazardous waste regulation

(Adapted from Gormley, 1986)

is low, but technical complexity is high, “board rooms” serve as the action arenas through which network tasks are coordinated. Lastly, when saliency and complexity are high, “operating rooms” are action arenas that make highly visible and technically complex decisions.

Gormley’s model is particularly useful for its generalizability across policy domains. In essence, the nature of the public goods and service provision dictates the type of action arena that is warranted. The S-C Model is also valued because it takes into account both the diversity of accountability structures in place that provide for the level of saliency, and the complexity of task coordination that often occurs in complex adaptive systems.

The specific value of the S-C Model in the study of governance networks centers on the articulation of action arenas as network configurations, and in the

relationship between visibility and technical information that is accommodated in the model. A case study of a governance network responsible for the design and deployment of new smart grid technology was recently undertaken by Koliba et al. (2014) and is highlighted as Application B at the end of Chapter 3.

The Three Complexities of Governance Network Processes

Eric Hans Klijn and Joop Koppenjan (2015), in their recent book, *Governance Networks in the Public Sector*, draw upon extensive research on governance networks to develop a framework for visualizing and explaining the factors that influence governance network processes. The authors focus their attention on three kinds of complexities that characterize governance networks: substantive, strategic, and institutional. *Substantive complexities* refer to the multiple perceptions that are held in regard to the “uncertainty and lack of consensus over the nature of problems, their causes and solutions” (p. 12). Given the wide array of actors involved in governance solution making, there will exist different ways to define the problems they address and the concomitant solutions. The second kind of complexity in governance networks, *strategic complexity*, “concerns the fundamentally erratic and unpredictable nature of the interaction processes within governance networks” (p. 13). This condition is a result of differentiated actors in the governance network that hold distinct kinds of strategic preferences that serve the interest of their agency and stakeholders. Often, these strategic differences are displayed and acted upon by calling upon other actors in the network to anticipate and respond without prior knowledge. A third kind of complexity, *institutional complexity*, represents a clash “between divergent institutional regimes and displays institutional complexity” (p. 14). This kind of complexity becomes evident due to the outlooks each member of the governance network holds as to how they are designed to operate in regard to the social issue that is addressed.

The impressive integrative work of Klijn and Koppenjan is summarized in an overarching theoretical framework on factors explaining governance network processes. Adding to the three complexities that are common among governance networks, the authors add two further domains in the overarching framework: (1) dimensions of interaction processes—dimensions influencing the three complexities; and (2) the outcomes that come from these interactions. The authors offer numerous strategies to address the kinds of complexities and interactions that are evident in governance networks that call upon research and practice to be cognizant of multiple factors that influence governance network operations. The authors call upon a “configuration approach” to analyzing and understanding governance components and dynamics as an essential start.

Managing Governance Networks Through Collaboration

One of the leading authors in the managing of governance networks offers a comprehensive review of case studies and related lessons in the managing of governance networks. Robert Agranoff, in his work, *Collaborating to Manage: A Primer for the Public Sector* (2012) offers a typology of a wide range of collaborative contacts and arrangements in governance networks—from minimal to maximum engagement—that illustrate what Klijn and Koopenjan refer to as strategic complexity. Agranoff then develops six themes through which managing governance networks can be understood: (1) the *conductive nature*—or interactive nature—of all organizations that serve the public; (2) the *tools of interaction* used by governance networks (grants, contracts, services, and audits); (3) learning how central connections among stakeholders—*contacts*—are managed in collaborative arrangements; (4) how the emergent *shared power* arrangements are managed in a multiple program effort; (5) a recognition that interconnections are both horizontal and vertical; and (6) understanding the influence on *public agencies that are evolving* from a rule-bound hierarchical management framework to one that is more interactive and collaborative. Combined, these themes—each drawn and summarized from a significant range of research—highlight what Agranoff refers to as “the new public organization.” The new public organization is one that “is much more than one that efficiently and effectively delivers service.” It must operate in a sphere of governance, working together with other entities in contractual forms of collaboration relations to seek the kind of public value expected from them (Agranoff, 2012, p. 186).

From the research on collaborative efforts in networks, Agranoff developed twelve ideas that lead networks to success:

1. Coordination without hierarchy—the movement toward a decentralized governing system where organizations can maintain their independence while working in coordinated operations;
2. Governing as governance—the recognition that governing includes a mix of public and private actors that operate at differing levels of interaction;
3. Reversible logic of implementation—the recognition of the limitations of top-down government service operation among governmental and non-governmental agencies where successful intergovernmental operations can be viewed from the agencies operating at the fundamental levels of operation;
4. Power dependence—the need to view service delivery as an interrelationship between funder and recipient with “fluctuating discretion”;

5. Interagency collaborative capacity—where coordinating activity becomes a kind of craft where interactions lead to cross-agency learning for future and ongoing operations;
6. Policy diffusion—a recognition that good ideas come from collaborative capacity: the sharing of tools, information, and processes to other domains;
7. Managing activities that make a difference—from the work of Michael McGuire (2002), four management activities are identified that facilitate network operations: incorporating persons and resources (activation); establishing the participants' roles, operating rules, and values (framing); the ongoing task for achieving network effectiveness (mobilizing); and enhancing the conditions for favorable and productive interactions among stakeholders (synthesizing);
8. Improving collaborative capacity—the development of collaborative resources, guidance, discipline, and economies of scale;
9. Joint learning—both public and private participants and stakeholders learn from each other in the nature of the problem and in problem-solving steps;
10. Collaborarchy—organizational structures that draw upon ongoing experiences and joint learning to facilitate network interests;
11. Control in networks—understanding how control strategies (personal, formal, results, culture, reputation) operate and influence network behavior; and
12. Challenges of accountability—that forms of accountability will be varied and built among participants.

Network operations that are concerned with these areas offer opportunities for developing strong connections among network participants—collaborative capacity—and for enhancing the success of the governance network—collective impact.

Collective Impact

A final meso level, complexity friendly theoretical framework to highlight here is the “collective impact” framework put forth by John Kania and Mark Kramer (2011). The collective impact framework is a compilation of many of the core systems thinking and network concepts reviewed throughout this book. The value of the framework lies less in its unique theoretical contributions, than in the packaging of these concepts into one coherent framework that is accessible to practitioners. Over the course of the past several decades, that pursuit of network development as a policy strategy has taken root. The Farm to Plate Network (highlighted in Application E at the end of Chapter 4 (Koliba, Wiltshire et al., 2016)) is one such example. Collective impact workshops and consultancy

are now very popular, serving as entries into the world of network development and management for many seeking innovative solutions to wicked problems.

The five core tenets of collective impact—common agenda, shared measurement, mutually reinforcing activities, continuous communication, and backbone support—are used here to distill five major network management and design implications that may be drawn from this study.

1. Common agenda: The value placed on information sharing underscores the role of information subnetworks as *the* process for the development of shared vision. Robust information sharing infrastructure is the key driver of common agenda setting (Koliba, Wiltshire et al., 2016).
2. Shared measurement: Some of the information that flows through the network is data (“market intelligence,” as it is called within the network), economic indicators, and information about network-wide activities. It is therefore highly likely that performance management data exists within the information sharing subnetwork of the most highly embedded network actors.
3. Mutually reinforcing activities: As we have noted, information sharing likely serves as the gateway to more complex forms of activities such as project collaboration and financial resource sharing. Understanding the nested hierarchy of operating functions discussed above is key to developing mutually reinforcing activities as the network evolves.
4. Continuous communication: Continuous communication is key to the success of this partnership network. In essence, all other facets of collective impact are enabled through this function.
5. Backbone support: The importance of backbone support for partnership networks reinforces the assertion about the role of the network administrative organization in building trust between network members found in the network governance literature (Provan and Kenis, 2008).

Governance networks are found in items 3 and 5. Mutually reinforcing activities are, part and parcel, the bread and butter of network activities. Networks are used to facilitate collective action. Backbone support hearkens to Keith Provan and Patrick Kenis’s notion of “network administrative organizations” (2008). Shared goals, the importance of effective community and information flows, and the development of shared measures of performance round out the model. Kania and Kramer see collective impact initiatives as spaces to cultivate emergent, self-organizing networks focused around the pursuit of common goals (2013). Of all of the theoretical frameworks discussed in this chapter, collective impact has proven to be the most effective at providing would-be network members and managers with the language and loose blueprint for pursuing network development as a policy strategy.

The “Complexity Friendly” Nature of these Theories

Some of the theories highlighted in this chapter impose homogenous assumptions about human decision-making behaviors, such as expected utility maximizing behaviors in IAD, while others assume more unpredictable, chaotic decision-making behavior, such as those found in the multiple streams framework. Another difference that arises across these frameworks concerns the balance between individual behavior and institutional norms and rules. ACF focuses attention on the role that common belief networks play in powerful advocacy coalitions, while IAD focuses more attention on the role that operational, collective choice, and constitutional rules play in shaping multi-institutional arrangements.

Drawing on the discussion of complex adaptive systems in Chapter 7 we distill the properties of complexity down to six distinct, but interrelated features: holism; emergence; feedback loops; self-organization; nonlinearity; and path dependency (Koliba and Zia, 2013). In order for a theoretical framework to be “complexity friendly,” it must be able to account for the following properties.

- *Avoid simple reductionism, addressing the holistic properties of complex systems.* This is the central tenet of complex systems—the whole is more than the sum of its parts. In the context of governance networks, we look to understanding the whole network as a unit of analysis. Complexity friendly theories that account for systems-level analysis are needed to provide greater explanatory power, particularly when boundary conditions, inputs and outputs, stocks and flows, and feedbacks are driven by multilevel and multiplex factors.
- *Accommodate the existence of feedback, stocks and flows, inputs and outputs.* The accommodation of feedback, stocks and flows, inputs and outputs, and variance in boundary conditions does not imply that these terms are explicitly employed as a feature of the theory.
- *Accommodate the emergence of new structures and functions.* All social structures, like the humans who build and sustain them, change over time. They are not static, but dynamic complex systems. As such, complexity friendly theories will have capacity to accommodate for this feature. Stage heuristic and process models are built with this very feature in mind.
- *Allow for the self-organization of the system as a whole or parts of the subsystem.* Not only can complexity friendly theories anticipate, or in the very least allow for, emergence, they may account for the capacity of whole systems or networks, or parts of a system or network, to self-organize. Our prior discussions of agency (see Chapter 4) and authority, and management and leadership speak to this point. Although we are very hesitant to suggest that the adaption of these complex systems unfolds under the conscious,

intentional direction of the whole system or parts of the system, complexity friendly theories should contribute to network actors' or agents' understanding of how the system works in order to govern or manage or lead it more effectively.

- *Allow for dynamic, nonlinear interactions that lack clear cause and effect relationships.* Given the understanding that these systems and networks are dynamic and ever changing, complexity friendly theories can shed light on the impact of nonlinear interactions of multiple variables upon network or subnetwork behaviors. Methodologies that allow for the study of such interactions are needed (a topic we turn to in Chapter 12).
- *Accommodate time and path dependencies.* The types of self-organization and nonlinearities found in complex adaptive systems such as governance networks are also temporally bound. Time serves as a third dimension, a vector to chart or track changes over a continuum. When viewed through the lens of time, network dynamics can be described in terms of specific, contextually driven path dependencies. The idea of path dependency has long been a staple of studies of policy implementation processes (see Pressman and Wildavsky, 1984).

All of the theoretical frameworks discussed in this chapter are, to one degree or another, amendable to the types of system dynamics and network architecture provided throughout this book. All of the theoretical frameworks presented here are grounded in a system dynamics logic, allowing for the existence of feedback loops, stocks and flows, and certain assumptions about input and output flows. All of these frameworks account for the roles that individual social agents, groups of agents, and organizations play in the whole system.

Testing and Tuning Theories

In this chapter, we have introduced this suite of theoretical frameworks to underscore one of the basic suppositions in this book: that governance networks are a unit of analysis and must, ultimately, be coupled with other theories in order to render explanations and predictions around performance.

When comparing *theories*, Edella Schlager (2007) proposed comparing boundaries and scope of inquiry through a model of the individual, collective action, institutions, and treatment of the policy change. For comparing *frameworks*, Schlager (2007) proposed focusing on types of actors, variable development, units of analysis, and levels of analysis. While these criteria provide important mechanisms to ascertain the commensurability of theoretical frameworks in terms of their boundaries and scope or models of individuals and

institutions, these descriptive criteria do not provide adequate methodology to “test” whether one theory better explains public policy and administrative systems.

Theory testing is limited by the lack of clear linear causalities fueled in part by the social construction of belief systems and the active, emergent, adaptive behaviors of individuals. Some have argued that individuals in governance networks have such heterogeneous behaviors that we cannot ever get comprehensive understandings of them. We may view this challenge from a meta-theoretical standpoint by juxtaposing a belief-based model of the individual (ACF) against a rule-theoretical model of the individual (IAD). These models of individual behavior may be coherent within the context of their specific theories; however, this “coherence” does not tell us whether belief-based models are better than rule-theoretical models in describing and explaining the behaviors of actors in policy systems.

The treatment of space and time plays a key role in the structuring of such meta-theoretical research programs to study and evaluate governance networks. Developing our capacity to understand how complex social systems adapt is of tremendous importance. The long-term development of a meta-theoretical program for modeling the complexity of governance networks will likely hinge on four clusters of critical questions:

1. How incommensurable are policy and governance theoretical frameworks?
To what extent are they compatible or comparable?
2. What are the spatial and temporal boundary conditions set for empirical studies of policy and governance systems? Where does the system begin and end? What gets included and left out of the model?
3. To what extent do assumptions concerning meta-patterning predetermine outcomes?
4. How can key constructs be empirically measured so as to be able to present the “testability” of hypotheses regarding optimal governance network structures and functions?

To adequately develop models that may be able to test the validity of certain meso level theoretical concepts requires finer and finer grain analysis of social phenomena extending across all levels of the social scale (individual, group, or organizations). In order to study, test, and tune the efficacy of theories relating to the social construction of policy streams, the path dependency of stable and destabilized systems, the decision-making structures within action arenas, the belief networks of advocacy coalitions, or the emergent features of network composition, we will need to develop mixed-method studies that combine elements of quantitative, qualitative, and simulation-based social science approaches, a topic that we turn to in the next chapter.

Notes

- 1 <https://www.brainyquote.com/topics/middle>
- 2 <https://www.brainyquote.com/topics/middle>

Chapter 12

Governance Networks Analysis: Implications for Practice, Education, and Research

Every great advance in science has issued from a new audacity of imagination.

—John Dewey¹

The central aim of this book has been to provide the reader with a sense of the characteristics that make up the governance networks within our midst. Synthesizing a wide range of literature drawn from a variety of academic fields and disciplines, a foundation for conducting governance network analysis as a function of one's practice, one's education, and one's research agenda is offered in this chapter. We have argued that governance, as understood in terms of network and system dynamics as well as democratic anchorage and accountability, is a critical and important feature distinguishing governance networks from other forms of interorganizational networks. Following the long line of public administration theorists and practitioners (March and Olsen, 1995; Pierre and Peters, 2005; Sorensen and Torfing, 2008), we have sought to anchor this conception of governance within the context of democratic theory. By integrating network and systems constructs with related theories of governance premised on the consideration of accountability and performance standards, "governance" serves as the modifier of a certain genre of interorganizational

networks. In the process, we have attempted to elevate governance processes, structures, and practices as the critical competencies that accompany a public administrator into his or her role as a network manager.

In this chapter, we point to the implications that this taxonomy has for administrative practice, education and training, and research. We discuss some of the *practitioner* questions and applications that may arise when governance networks are critically considered. We then consider the implications that the turn toward governance and networks, embodied in the extensively rich and multifaceted literature presented here, has for the *education and training* of present and future public administrators who are finding (or will find) themselves operating as governance network managers (leaders and followers alike). We then offer some considerations pertaining to the *empirical study of governance networks*, focusing particular attention on the potential for greater case studies, hypothesis testing, and simulation modeling. We conclude with a discussion of action research methods and designs.

Deepening Our Situational Awareness of Governance Networks

In Chapter 8 we discussed the role that situational awareness has in developing a network administrator's systems thinking skills and strategies. To reiterate, situational *awareness* "is the perception of the elements in the environment within a volume of time and space, the comprehension of their meaning, [and] the projection of their status in the near future." Situational awareness of network actors should inform shared goal selection and give attention to appropriate critical cues and expectancies regarding future states of the situation (Endsley, 1995, p. 34). Commenting on the importance of such awareness, Beryl Radin observes: "If we want to operate within a complex and dynamic system, we have to know not only what its current status is but what its status will be or could be in the future, and we have to know how certain actions we take will influence the situation. For this, we need structural knowledge, knowledge of how the variables in the system are related and how they influence one another" (2006, p. 24). The taxonomy presented in this book can be used to advance our structural knowledge of governance networks.

This body of work has been premised on a set of assumptions regarding the framing of a network perspective, discussed here by Bressers and O'Toole:

An advantage of a network perspective is that it can be used to direct attention to the larger structures of interdependence. Instead of assuming that influence takes place only through direct and observable interactions, whether as personal relationships or among representatives

of institutional interests, *a network approach—applied to portions of a policy process as varied as formulation and implementation—can investigate how the larger structure can have systematic effects on the behavior of individual actors as well as on the content of decisions, policy responses, and implementation efforts.* A network approach thus offers the chances to continue both interpersonal and structural explanations for policy-relevant events.

(2005, p. 147; italics added)

The structural knowledge inherent in Bressers and O'Toole's observation can contribute to the answering of some basic, but critically important questions about governance networks:

- *What capital resources, types of ties, policy tools, administrative strategies, accountability structures, and performance management systems need to be in place to ensure that networks function properly?* In essence, those managers operating inside of or outside of a governance network need to be capable of accessing and using a range of administrative tools and strategies at their disposal.
- *Which actors should be involved in a governance network?* Public administrators may be playing the role of network activator (Salamon, 2002a) or catalyst (Fox, Ward, and Howard, 2002), and have an instrumental role in determining which actors are in the governance network. They may choose which actors to contract or partner with. They may broaden or narrow the range of actors implicated under their regulatory and oversight authority.
- *When should we attempt to enter into a governance network?* When should a nonprofit organization or private business pursue a grant or government contract? When should actors decide to cooperate in an effort to share and pool resources?
- *How do we manage within the governance networks that we are already operating within?* We may be already operating within the belly of a governance network, without much capacity to exit it. How do we clarify our roles within the governance network? To what extent do we have the power or authority to modify the flow of capital resources in the network? How might we devise accountability and performance management systems to govern this network? Why might we want to consider leaving the network?
- *What are the functions of the governance network?* Does it have discernible boundaries and borders?
- *What is our role within this governance network?* Does our organization understand that we're participating in the network on its behalf? Do we have adequate resources?

- *To whom are we accountable?* To what extent are these accountabilities forged on weak or strong ties? To what extent is there a clear understanding of to whom accounts are to be rendered within the governance network?
- *When should we actively seek to alter the accountability structures of our own organizations in order to pursue network-wide goals?* How do we manage accountability trade-offs? Accountability couplings? What kinds of skills and strategies are needed to operate within a hybridized accountability regime?
- *How is network performance defined? Who is doing the defining? How is network performance measured and managed?* Where within the governance network are network performance data discussed, used to make decisions, and acted upon?
- *Is it possible to design a governance network?* What are the few simple rules that set governance network activity in place?

Integration of Governance Network Analysis into Formal Education and Training

During his 2004 keynote address at the National Association of Schools of Public Affairs and Administration (NASPAA) Annual Conference in Indianapolis, Indiana, Lester Salamon threw down a gauntlet to deans and graduate program directors. After laying down the conditions that give rise to a new governance perspective, he called for curricular reforms that prepare present and future public administrators to “design and manage the immensely complex collaborative systems that now form the core of public problem-solving and that seem likely to do so increasingly in the years ahead” (Salamon, 2005, p. 10). He was quick to note as well, as did Charles Goodsell a year later (2006), that the new public management framework geared toward reforming public bureaucracies to be more like businesses does not adequately prepare networked administrators.

For public administration educators there would appear to be a growing need to provide a curriculum devoted to the study of governance networks. Given the proliferation, complexity, and need for greater accountability for and within governance networks, the need to provide students of public administration with greater opportunities to critically examine governance networks and ascertain where and how public administrators are to play a role within them is only increasing. To this end, courses and training need to be developed to provide students with an overview of the trends and factors shaping governance networks.

Koliba (2006) lays out a series of learning outcomes that are needed to prepare students to lead within these complex, networked environments:

- *Identify the reforms and trends in governance that have given rise to the evolution of governance networks.* They must be able to situate a governance

network perspective within the context of the public administration's core themes and history. This will ultimately call for the extension of the public administration canon to account for these shifting paradigms (Goodsell, 2006).

- *Explain the roles and motivations that various actors take on through networked relationships.* In light of the new public management's focus on business practices, a serious look at the complementary and competing governance and accountability structures of different sectors is called for. Students should be encouraged to engage in serious, critical discussions regarding the role that profit-making and market mechanisms bear not only on the assumed improved efficiencies, but also on maintaining the normative basis of the public administration field.
- *Understand how policy tools and public action tools mobilize, or are utilized by, governance networks.* As we think about the defining characteristics of networked activities, the roles of policy tools (Salamon, 2002b; Howlett, 2005) and other public action tools (Agranoff and McGuire, 2003) become important. Not only do these tools mobilize network activity, but they are used to monitor and critique it. In essence, students must learn the extent to which governance networks are implicated within the public policy process and the coupling of policy streams.
- *Understand some of the challenges and factors involved in the successes and failures of networked activities, including the importance of goal alignment and functional compatibilities.* There is a growing body of literature that looks at network failures and successes. These may be used to provide students with insight into the kinds of conditions necessary to ensure network effectiveness. Case studies of network failures (as in the cases of responses to 9/11 (Comfort, 2002) and the failed response in the aftermath of Hurricane Katrina (GAO, 2006; Kiefer and Montjoy, 2006)) may be juxtaposed against cases of success or near success (Provan and Milward, 1995; Agranoff and McGuire, 2003; Wines Smith and Roberts, 2003; Townsend, 2004; Guo and Acar, 2005) to highlight central issues pertaining to governance within networked environs.
- *Identify the kinds of skills and functions that public administrators take on within the context of networked relationships.* The public administration field has historically focused on the structure and functioning of vertical relationships within public bureaucracies. However, the growing recognition that public administrators must "cross boundaries" (Kettl, 2015) and work horizontally across departmental and even organizational lines calls for the study of collaboration and the situations and conditions within which collaborative arrangements are feasible and effective. Students must be exposed to case studies and expert practitioners skilled in building collaborative partnerships. In the process, they must be prepared to execute

“coordinating strategies of actors with different goals and preferences” (Kickert, Klijn, and Koppenjan, 1997a, p. 10).

- *Draw upon some of the relevant theoretical foundations to analyze governance networks.* Students should be exposed to transdisciplinary theoretical frameworks that may be used to better understand the intricacies of complex governance systems. Social capital theory, rooted in assumptions regarding the relative value of social relations and the levels of trust, reciprocity, and norms developed within them, is useful in assessing the qualities of networks (Putnam, 1993, 2000; Baron, Field, and Schuller, 2000). Network theory, originating out of the field of sociology, has focused on the nature of exchanges that take place between actors involved in a network (Marsden and Laumann, 1984; Milward and Provan, 1998). Community of practice theory, emerging from the organizational learning and knowledge management fields, is useful in describing and assessing inter- and intraorganizational relationships between actors (Snyder, Wenger, and de Sousa Briggs, 2003). Complexity theory builds upon a systems analysis framework, underscores the self-organizing capacities of groups, and can be utilized in describing complicated network activities and patterns (Haynes, 2003; Koppenjan and Klijn, 2004; Morcol and Wachhaus, 2009).
- *Critically assess how and where accountability and accountability regimes work within network structures.* The complexity that coincides with networked activities generates additional accountability challenges (Posner, 2002; Page, 2004). As network governance continues to gain prominence in the field, it will become increasingly vital that frameworks and structures are in place to hold actors from different sectors accountable to the public at large. This is a daunting task: Accountability structures vary across sectors, and the mechanisms to enforce public accountability become blurred as the number of actors in a network increase (Behn, 2001; Dowdle, 2006; Mashaw, 2006). Public administration students must be encouraged to look at the nature of the accountability regimes (Mashaw, 2006; Papadopoulos, 2010; Koliba, Mills and Zia, 2011) at work within governance networks. Arguably, the rise of a governance network perspective makes this task all the more challenging.

Methods to Study and Model Governance Networks

Ultimately, the systemic examination of the governance network as a unit of analysis will lead to certain utility for practitioners, citizen groups, and educators. That governance networks proliferate virtually everywhere (Sorensen and Torfing, 2005) should be cause enough to warrant the mounting of such a research

enterprise. By advancing governance networks as a unit of analysis, generalizations regarding the interplay of network variables may be rendered. Ultimately, these generalizations should yield insights into the design, administration, and monitoring of governance network activity. Issues of democracy, accountability, and fairness in network governance may also be proposed as important metacriteria for developing theoretical frameworks.

While theoretical and empirical contributions to understanding adaptive governance are growing in volume under multiple research initiatives (Folke et al., 2005), the study of adaptive governance can be further deepened through the parallel theoretical frameworks found in Chapter 11 that have emerged in the fields of public policy, public management, and public administration to study collaborative and network governance approaches in the face of ambiguous, wicked, and complex public policy problems. The broader shift from government to governance and the hollowing out of the government in this age of contracting out public services to third party vendors has further necessitated the need to study the evolving and dynamic nature of governance networks from a complex systems perspective. In this context, Zia, Koliba, and Tian (2013) lay out four broad clusters of questions for governance network analysis:

1. Formation: How are governance networks formed? Who is included and who is excluded from these governance networks? What are the goals of these governance networks?
2. Operation: How do governance networks operate? What type of activities are performed by governance networks? What do governance network actors decide and how? How do different institutional arrangements and socio-economic structures affect the operations of governance networks?
3. Performance and accountability: How do meta-governors manage the performance of governance networks? How could accountability flows be democratically anchored in governance networks?
4. Sustainability: How could governance networks be sustained across spatial and temporal scales? What type of institutional arrangements could be facilitated by meta-governors to enable sustainability of effective and democratically anchored governance networks?

The most extensive body of empirical research on governance networks exists in the form of written case studies that are often rich in detail and categorization (to cite a few of the book-length studies of multiple cases: Agranoff and McGuire, 2003; Koontz et al., 2004; Frederickson and Frederickson, 2006; Agranoff, 2007; Agranoff, 2017). In all of these cases, extensive field studies were rendered involving direct observation, interviews, surveys, and the analysis of secondary data. Case studies provide an opportunity to render “thick descriptions” (Geertz, 1973) of social phenomena. Case studies may identify critical individual actors—

those network administrators operating inside the network who are either succeeding or failing. We believe that there is a greater need to focus on describing and analyzing the governing committees, teams, boards, and other communities of practice responsible for network governance and administration, as has been done by Koontz et al. (2004) and Agranoff (2007).

In the classes that we have taught using this framework, students have been asked to apply the framework to existing case studies. For those seeking more in-depth applications, we have found two studies to be instructive: (1) David and George Frederickson's (2006) *Measuring the Performance of the Hollow State*, which focuses on performance management in health care networks, and (2) Thomas Koontz et al.'s (2004) book, *Collaborative Environmental Management: What Roles for Government?*, which features comprehensively written case studies of environmental management networks. We found the case studies in these two books to be extremely useful in this regard. Students have also applied the framework to governance networks of their own choosing.

A wide variety of methodologies have been employed to answer some of these questions. The extensive Applications sections found at the end of many chapters in this book employ a wide range of methods. Space precludes a detailed review of all of the methods, all of which need to account for the complexities discussed at length in Chapters 7 and 11. To capture this complexity a "methodological pluralism" is suggested (Norgaard, 1989). Useful research methodologies need to be able to capture the spatial and temporal variances that occur within governance networks, and between governance networks and their wider external environments. "The need to *capture spatial and temporality variance* is highlighted by the tension between case specificity and higher resolution approaches that encompass larger n-studies that look for recurring patterns. The risk with case specificity is that not much can be explained outside of a particular case, while the risk of higher resolution, large-n studies is that a more general overview leaves out the finely-grained details that are so important in complexity. Ultimately, accommodating complexity in studies of governance networks necessitates that this divide be negotiated" (Koliba, Gerrits, Rhodes and Meek, 2016, p. 373).

The complexity of governance networks also warrants concerns about uncertainty. "The need to *balance the desire for prediction against the heightened levels of uncertainty associated with studies of complex systems*. Researchers and modelers must consider the extent to which [Complex Adaptive Systems] CAS approaches to governance provides *predictive power*, i.e., the question of whether research on complexity allows for prediction, and whether prediction is even possible given the inherent uncertainty within complex systems" (Koliba, Gerrits, Rhodes, and Meek, 2016, p. 373).

Koliba, Gerrits, Rhodes, and Meek (2016, pp. 373–374) listed some of the research methods that are useful in studying and modeling complex governance

networks. Examples of some of these methods can be found in the Applications found throughout this book. These Applications are listed below.

- *Single thick descriptive case study*: Good at describing contextual complexity, but limited in capacity to generalize (see examples in Applications B, C, D, E, L, M, N, and O).
- *Comparative case studies*: Good at describing contextual complexity; can lead to building deeper pattern recognition across embedded cases; effectiveness contingent upon the use of a robust comparative framework; still limited capacity to generalize (see Applications F, G, P, and R).
- *Concept mapping and visualization*: Good for articulating complexity in a simplified manner; can be constructed using robust data collected through other means; limited capacity for generalization (see Applications A, B, C, D, E, F, G, I, L, and P).
- *System dynamics modeling*: Good at capturing feedback loops and stocks and flows; data hungry.
- *Network analysis*: Good at representing governance relations as nodes and ties; provides a consistent way to describe and compare network properties; limited capacity to capture dynamic and emergent properties although improving through Dynamic Network Analysis; as of now, difficult to render generalization (see Applications D, E, F, and G).
- *Qualitative comparative analysis*: Good for studying the contingency of phenomena and allows building representations of real complex systems; only as sound as the conceptual framework backing it up.
- *Process analysis, which contains a variety of similar sub-tools such as phasic analysis, event time series analysis*: Good for studying the dynamics through time instead of serial statics; still constrained by linear representation (see Applications C, I, M, and N).
- *Agent-based modeling*: Good for tracing the roots of complexity and emergence to simple rules of behavior creating that emergent complexity; allows for bottom-up behavior; easy to nest agents inside of one another and simulate networks; data hungry (see Application I).
- *Structural equation modeling*: Good for combining qualitative and quantitative data in exploring competing models of complex systems; only as effective as the conceptual models underlying it (see Application Q).
- *Neural network modeling*: Good for understanding how social systems learn and evolve; data hungry; computationally very complex.
- *Machine learning*: Good for developing novel theory; expanded capacity for pattern recognition; enables big data analysis; computationally very complex.
- *Experimental design*: Good for understanding how “simple rules” govern behavior; relatively easy to construct experiments; only good at under-

standing the behaviors of discrete elements of a wider complex system. Also used for comparing hypotheses and theories in practice.

Modeling Complex Governance Networks

The combining of elements of case study analysis with data intensive computational tools of network analysis and computer-based simulation modeling is increasingly being employed in the study of governance networks. The most extensive applications of *social network analysis* to the study of governance networks within the public administration literature have been undertaken by Louise Comfort (2002, 2007), Naim Kapucu (2006a, 2006b; Kapucu, Arslan, and Demiroz, 2010; Kapucu, 2012), Jeorg Raab and his colleagues (Raab, Mannak, and Cambré, 2013; Raab and Milward, 2003); Robin Lemaire and her colleagues (Provan and Lemaire, 2012; Lemaire and Provan, 2009), Mark Lubell and his colleagues (Lubell and Fulton, 2007; Lubell et al., 2012), and Branda Nowell and Todi Steelman (Nowell and Steelman, 2014) who have applied the tools of social network analysis (and their related software applications) to the study of emergency management networks, watershed management networks, and social service delivery networks. These tools are particularly useful in studying the nature of the ties occurring between network actors. Social network analysis allows for the coding of ties based on strength, types of resource flows, and formality. The position of actors vis-à-vis their networks may be studied, providing a capacity to not only test the kind of hypotheses discussed above, but also recreate holistic systems models of existing governance networks. Dynamic models may be employed to anticipate the emergence of future structures and functions (Miller and Page, 2007).

Miller and Page describe simulation modeling as an “attempt to reduce the world to a fundamental set of elements (equivalent classes) and laws (transition functions), and on this basis . . . understand and predict key aspects of the world” (2007, p. 40). Social network analysis provides one set of elements that may be relied upon to build a model. “Modeling proceeds by deciding what simplifications to impose on the underlying entities and then, based on those abstractions, uncovering their implications” (Miller and Page, 2007, p. 65). Social network analysis simplifies the structures of networks into a series of nodes and ties.

Those who view social networks in terms of complex adaptive systems have begun to ascribe agency to actors in the network into agent-based models (ABMs). Miller and Page describe the difference between ABMs and other forms of complex systems dynamics models:

The agent-based object approach can be considered “bottom up” in the sense that the behavior that we observe in the model is generated from

the bottom of the system by the direct interactions of the entities that form the basis of the model. This contrasts with the “top-down” approach to modeling where we impose high-level rules on the system—for example, that the system will equilibrate or that all firms profit maximize—and then trace the implications of such conditions. Thus, in top-down modeling we abstract broadly over the entire behavior of the system, whereas in bottom-up modeling we focus our abstractions over the lower-level individual entities that make up the system.

(2007, p. 66)

Bottom-up models of governance networks will start with the characteristics of each actor in the network, including the roles that individuals, groups, and organizations play. In dynamic agent-based models, the behaviors of these agents are ascribed certain characteristics or some ranges of intensity around certain characteristics, with the system virtually “taking on a life of its own.” Top-down models deduce the essential properties to be modeled and construct nonlinear models to predict outcomes. An example of an agent-based model developed by two of this book’s co-authors (Asim Zia and Chris Koliba) can be found at the end of Chapter 7 (Application I).

As a form of object-oriented, process-based modeling, the first major feature of all ABMs is “agents” that may be construed as social actors (individuals, animals, groups of individuals, organizations), physical or natural objects (atoms, buildings, commodities, built and natural infrastructure, stars and galaxies), or socially constructed, but reified objects of organized activities: programs or projects or processes. Agent behaviors are modulated by formal or informal rules, tipping points, resource constraints, network structures; evolved by meta-rules governing the rules and networks; and typically parameterized using fixed and variable values. Clusters of fixed sets of parameters form the basis of certain classes of agents in which agents of similar type will possess specific common characteristics. Social agents may be endowed with certain gender, age, ethnicity, wealth, etc. Organizational agents may possess certain human resource capacity, financial resources, missions, objectives, sectorial characteristics, etc. Project agents may possess fixed resources or resource needs. Physical or natural agents, such as buildings and facilities or parcels of land, may carry specific physical or natural characteristics.

Agent parameters may also be variable, and subject to manipulation by the modeler to render specific scenarios. For instance, a social agent may possess more or less risk aversion, more or less social affinity, more or less propensity to maximize utility, etc. These varying behaviors lead to decisions that, in turn, have an effect on other agents and other aspects of the modeled environment. Under certain circumstances, agents may grow in size and influence, lose power and influence, “die,” “end,” change form or properties, etc. Computationally,

each agent possesses its own set of attributes (often produced from an Excel or batch file), as well as a “state chart”—similar to a flow chart that lays out the scope and sequence of decision making and process flows. Agent behavior may be programmed to exhibit memory, path-dependence, and hysteresis, non-Markovian behavior, or temporal corrections, including learning and adapting (Bonabeau, 2002, p. 7280).

A second major feature of an ABM is that agents interact with each other. These relationships often take the form of network ties or some kind of spatial proximities—meaning that if an agent is adjacent or linked to another agent it may exert some measure of influence over that agent. The actions of one agent can serve as inputs into the decision heuristics of another agent, sometimes directly, and most certainly at the macro level scale. “Agent interactions are heterogeneous and can generate network effects” (Bonabeau, 2002, p. 7280). The interactions between these agents are mediated through nonlinear dynamics shaped by *agent characteristics* (e.g., social scale, sector, jurisdiction, and capital resources); *tie characteristics* (e.g., administrative arrangements, capital resource flows, and accountability structures); and *network-wide characteristics* (e.g., macro level structures instigated through the application of particular policy tools, market forces, system stock and flow patterns, and network-wide accountability and performance regimes).

A third major feature of an ABM lies in the ability of the modeler to run scenarios that are generated through configuration changes made to network structures, behavioral rules, meta-rules, and specific variable parameters. The scenario configurations may appear as “sliders” in a user interface that can be fashioned as “dashboards” for undertaking scenario development. Simulation “experiments” may be run to ascertain the impact that changes to certain configurations play in shaping model outputs. By running and comparing these “what if” scenarios as experiments, interesting policy analysis, theory testing, and theory tuning may take place (Koliba, Zia, and Lee, 2011; Koliba and Zia, 2015b).

The application of computer simulation modeling to address the kinds of questions of concern to the public administration field has begun to emerge. Agent-based models have been constructed of collaborative governance groups and combined with game theory to yield studies that examine some of the fundamental tenets guiding the establishment of voluntary ties (Axelrod and Cohen, 1999), with specific inferences drawn to administrative practice (Knott, Miller, and Verkuilen, 2003). There is also a growing body of research that is focused on “pattern-oriented” (Grimm et al., 2005) computer simulation models that employ agent-based models to study complex governance networks carrying on specific policy functions. These examples include models looking at the governance of water resources (Lansing and Kremer, 1993; Janssen and Ostrom, 2006; Schlüter and Pahl-Wostl, 2007; Zia et al., 2017); environmental hazard

mitigation and economic justice (Eckerd, 2013); school choice and institutional capacity (Maroulis et al., 2010; Maroulis, 2016); patterns of fraud in public service delivery networks (Kim, Zhong, and Chun, 2013); and the impact of equity and resource scarcity and flux on transportation project prioritization in intergovernmental settings (Zia and Koliba, 2013, 2017). Each model possesses agents operating at different scales, parameterized using at least some empirical data, and poses a number of scenarios to build understanding of important public policy or common pool resource management issues.

The capacity of computer simulation models of complex governance networks to lead to accurate forecasting and predicting of particular policy outcomes is conflated by the “deep uncertainty” that characterizes our current state of understanding of complex social systems. Banks (2002) characterizes this deep uncertainty arising as, “the result of pragmatic limitations in our ability to use the presentational formalisms of statistical decision theory to express all that we know about complex adaptive systems and their associated policy problems” (p. 7263).

As our capacity to undertake data mining of textual and narrative data expands, the opportunities to understand the phenomenological traces of nuanced network interactions intensifies. These advancements will deepen our capacity to develop finer and finer grained analysis of governance networks and, in the long run, allow for the integration of theories and frameworks not only drawn from the kinds of policy and governance theories highlighted here, but also extending into our theories of management as well.

Those who have written about the promise and limitations of developing computer simulations of policy and governance networks note that the purpose for undertaking this may not lie in predicting “the future state of a given system,” but rather “to understand the system’s properties and dissect its generative mechanisms and processes, so that policy decisions can be better informed and embedded within the system’s behavior, thus becoming part of it” (Squazzoni and Boero, 2010, p. 3). Grimm et al.’s (2005) notion of pattern-oriented models and the notion of theory testing and tuning, mentioned in Chapter 11, are important considerations here. Under the rubric of computer-generated decision support systems, the very process of providing feedback about a system’s dynamics and network structure to critical agents in the system itself becomes an important component of decision making and action. These models can be used “when policy makers need to *learn from science* about the complexity of systems where their decision is needed,” as well as “when policy makers need to *find and negotiate certain concrete ad hoc solutions*, so that policy becomes part of a complex process of management that is internal to the system itself” (Squazzoni and Boero, 2010, p. 6). There is, indeed, a long history of employing computer simulation modeling to stimulate systems thinking (Mitroff et al., 1974) and decision support systems.

Utilizing Action Research and Simulation for Planning and Design

Examples of the utilization of traditional and more computationally rich research and modeling methods to support the situational awareness of network activators, catalysts, and managers are increasing in number, as governance networks analysis and “action research” approaches are actively combined. French and Bell define action research as

the process of systematically collecting research data about an ongoing system relative to some objective, goal, or need of that system; feeding these data back into the system; taking actions by altering selected variables within the system based both on the data and on hypothesis; and evaluating the results of actions by collecting more data.

(1999, p. 130)

Chris Argyris and Donald Schon (1995) view action research as intervention experiments through which evaluative data are used to inform organizational practices. To structure such inquiries as interventions, a certain measure of intentionality in the design of the action research process must be taken (Koliba and Lathrop, 2007). Action research processes are grounded in theories of organizational and experiential learning. Action research projects may employ a wide range of research methods, including all of the methodological approaches mentioned in this chapter.

Action researchers will likely collect data that may be used by a performance management system to generate greater understanding of existing practices and processes. This systemic evaluation leads to the development of sense making, “based on the assumption that interventions purported to enhance learning in practice should focus more on bringing out people’s natural information-seeking and learning behaviors” (Parboosingh, 2002, p. 234). By integrating action research designs and processes into their performance management system, groups of individuals within a governance network will form communities of practices designed to share information, learn, and transfer and build knowledge (Fetterman, 2002; Foth, 2006; Gajda and Koliba, 2007; Koliba and Gajda, 2009). By intentionally situating action research processes within governance network operations at this level, we believe it is possible to integrate action research practices into the performance management systems of governance networks.

The key to utilizing action research and performance management in this way is to understand how consensus among stakeholders relates to the degree of understanding and application of system dynamics (and situational awareness) to current thinking. Marjan van den Belt describes the relationship between

combinations of systems thinking and consensus and the kind of action research interventions possible in Table 12.1.

We believe that this typology is helpful in distinguishing the different ways that action research and modeling can be applied to the operations of governance networks. When there is little to no consensus around goals and little degree of systems thinking, there exist very few opportunities for strategic change to be undertaken—the status quo reigns. When there is goal consensus but little adaptation of systems thinking and situational awareness, good discussions are possible that may or may not lead to constructive decisions and actions. Little goal consensus, but a high degree of systems dynamics yields expert-driven models of complex adaptive systems, but the interface between experts and decision makers may be limited (as they will likely be when there is little consensus on goals).

Van den Belt suggests that mediated modeling processes may be devised when goal consensus is high and there is a widely understood appreciation of systems dynamics. She describes mediated modeling in terms of a distinct, staged process that mirrors the cycle of inquiry discussed in the previous chapter. Modelers work with key stakeholders to determine the critical values and variables that matter most to them. Models are constructed based on these preferences. Other

Table 12.1 Interventions: Understanding of Systems Dynamics versus Degree of Consensus

		<i>Degree of Consensus among Stakeholders</i>	
		<i>Low</i>	<i>High</i>
Degree of understanding of systems dynamics	Low	Status quo Typical result Confrontational debate and no improvement	Mediated discussion Typical result Consensus on goals or problems but no help on how to achieve the goals or solve the problems
	High	Expert modeling Typical result Specialized model whose recommendations never get implemented because they lack stakeholder support	Mediated modeling Typical result Consensus on both problems/goals and process, leading to effective and implementable policies

Source: van den Belt (2004). *Mediated modeling: A system dynamics approach to environmental consensus building* (p. 18). Washington, DC; Island Press. Reproduced by permission of Island Press.

forms of action research found within the organizational and experiential learning literature and applied across every policy domain make the most sense when consensus is high and system thinking prevails. Van den Belt (2004) focuses her attention on the use of system dynamics models that develop by using stocks and flow and feedback factors in the design, but ABMs may also be employed in this manner as well (Tsai et al., 2015). Mediated modeling approaches can be merged with classical Delphi approaches to design “crowdsourced delphis” for diagnosing and solving complex policy and governance problems (Coleman et al., 2017).

Governance Informatics

Employing an “informatics” or information-rich approach to modeling complex governance networks in collaboration with stakeholders pushes us to consider how knowledge of governance arrangements informs decision making in ways that possess real implications for practice (Koliba and Zia, 2015b). “Governance informatics is predicated on the assumption that by building the capacity to describe governance processes of heterogeneously interacting agents in complex interorganizational environments, network managers will be in a better position to adaptively manage the wicked problems surrounding the accountability and performance of interorganizational governance networks” (Koliba, Zia, and Lee, 2011, p. 4) Taking this informatics approach, we posit that the kind of governance knowledge to be culled from informatics platforms can contribute to the situational awareness of stakeholders.

The primary objective of the governance informatics approach is the conscious development of “governance knowledge” and use of this knowledge to inform the cultivation of shared mental models regarding the structures, functions, and performance of governance networks. When woven into a process of authentic engagement, governance informatics projects can become spaces where transformative and adaptive changes may be undertaken. The stages of a governance informatics project include:

1. The clarification of initial boundary conditions of the problem and the governance network to be modeled
2. The development of initial scoping models through qualitative mapping
3. The formation of a simulation model²
4. The development of problem and governance scenarios with stakeholders³
5. The running scenarios to inform decision making

The overarching goal of governance informatics projects lies in building stakeholders’ awareness of the relationship between a network’s structures, functions, and performance.

Within the Applications segments of the book, examples may be found of a few governance informatics projects undertaken by the co-authors of this book. The projects involving water quality, food systems, and transportation project prioritization (see Applications D, G, E, and I) have had an ongoing adaptive management/action research component to them involving ongoing engagement with stakeholders (see Coleman et al., 2017 for a discussion of some of the methods used in these studies). The research presented in the examples of water quality management networks (Application G—Koliba et al., 2015; Application D—Scheinert et al., 2015) within the Lake Champlain Basin was undertaken to inform and shape the design of future governance and policy responses in the region.

Examples of initial scoping models of governance networks may be found within the many visualizations of governance networks, including 3D plane diagrams (see Figures B.1, D.1, I.1); 2D relational diagrams (see Figures A.1, C.1, E.1, L.2, P.1); and network graphs (see Figures D.2, E.2, F.1, G.1, G.2, G.3, I.2).

An example of a completed simulation model to scenario development can be found in Application I. Zia, and Koliba (2013, 2017) worked with stakeholders to design an agent-based model. Scenarios were developed in concert with stakeholders (see Table I.2) and used to inform policy making going forward.

Expectations are building regarding the “big data,” “ubiquitous computing” era within which this book is being written. The ideal behind these efforts lies in the potential to apply data analytics (sometimes referred to as “policy informatics” (Johnston and Desouza, 2015)) to develop the capacities of complex systems to behave more effectively. There exists considerable focus on transitioning to the “smart grid” to manage our energy infrastructure (see Application B). Transportation planning systems are utilizing real-time data to monitor traffic flows and critical incidents (see Applications I, P, and Q). Self-driving cars, remote sensing tools, and the “internet of things” are looming as “disruptive technologies” capable of altering how societies are governed and function. Simulation models are increasingly being used to train soldiers and teach students and practitioners (Koliba and Zia, 2015a, 2015b). The value of these approaches lies in the potential they provide for us to gain a firmer grasp on how natural, engineered, and social systems work and are governed, and apply this knowledge to the effective stewardship of the natural environment, more effective design-engineered systems, and the effective management, administration, and democratically anchored governance of social systems.

In this chapter we offer a range of research methods, decision support aids, and learning approaches that are being used to advance the analysis of governance networks and perhaps more importantly, deepen our situational awareness regarding the structures, functions, accountability, and performance of governance networks. We have chosen to conclude the chapter with a look forward, at a

future of governance studies that embraces complexity and looks to integrate governance networks into broader studies of complex phenomena. The systems and network logic underlying the governance network as a unit of analysis, as it has been defined here, provides for further opportunity to view the governance network as a *dependent* variable in the kind of experimental, scenario, simulation, and design approaches discussed here. This logic also affords use of a greater opportunity to incorporate governance networks into broadened, transdisciplinary studies of social-ecological and social-technical systems. In these studies, governance networks also serve as independent variables that may have impacts on ecological or technical systems (see Folke et al., 2005; Pahl-Wostl, 2009; Newig, Günther, and Paul-Wostl, 2010). Also see Applications B (smart grid deployment), D, and G (water quality management) for examples of studies that have been integrated into wider transdisciplinary studies of energy transitions in social-technical systems and water management in social-ecological systems.

Notes

- 1 (1929, p. 310).
- 2 Examples of which appear in Zia and Koliba (2013, 2017), Application I, and Scheinert, Zia, and Koliba (2017).
- 3 For an example of this process, see Coleman et al. (2017).

Chapter 13

Postscript: The Case for Stronger Democratic Anchorage in Governance Networks

The question we ask today is not whether our government is too big or too small, but whether it works.

—Barack Obama¹

We conclude by revisiting a major theme woven throughout this book, namely, the democratic imperative of governance network analysis. Some important normative considerations facing the future of network governance have been raised in this book, specifically: the democratic anchorage of governance networks. Building on the longstanding assumptions regarding the role of the state and its sovereign obligations and the basic tenets of democratic theory, governance networks operating within a democratic context need to bear a significant democratic anchorage in order to be deemed legitimate in the eyes of their democratic “accountees.” We assume that such an anchorage is crucial to ensure that certain overarching policy goals are achieved. This is a point raised initially by Eva Sorensen and Jacob Torfing in 2005 when they first introduced the term democratic anchorage into the literature, and underscored in many of the studies highlighted in this book (see specifically Applications B, D, I, L, M, N, O, and R). Recent case study work led by Asim Zia (Zia and Koliba, 2011; Zia and Hameed, 2014) applies the concept of democratic anchorage to two of the most pressing international issues facing the present generation: climate change,

and security and anti-terrorism. We have also seen in studies of governance network failure during times of natural and human induced disaster, particularly in regard to response and recovery following Hurricane Katrina (Koliba, Mills, and Zia, 2011) and the events leading up to the BP oil spill (Mills and Koliba, 2014), how the failure of sufficient democratic anchorage fueled these crises.

The notion of sovereignty within a democratic context is that those doing the governing need to obtain the consent of the governed. Considered within the context of traditional governance arrangements, consent was to be delivered through a combination of electoral processes and other forms of deliberative process designed to ensure authentic citizen involvement within the governance process. However, as we have noted in Chapter 1, these arrangements have either always been complicated or are increasingly becoming more complex. Simplistic approaches to the “administrative state” bound together by static and bloated government bureaucracies is simply not the norm, and likely has not been the norm for at least many decades now (Kettl, 2015; Agranoff, 2017). The capacities of elected representatives and citizens to, essentially, democratically anchor networks are continually evolving. *The extent to which democratic anchorage erodes to the point where the essence of state sovereignty ceases to exist in the structures and functions of governance networks needs to continue to be one of our most pressing points of concern.*

Some may argue that the democratic anchorage of governance networks is being eroded when certain groups capture the interests of governance networks, inevitably leading to behaviors and actions that mimic those interests captured in the process. We see this evidence in instances of “regulatory capture,” the obtuse operations of some interest group coalitions and iron triangles, and the wholesale privatization of certain functions of sovereign governments.

Efforts to ensure the democratic anchorage of governance networks will be greatly enhanced by advances in public interest and public values frameworks (Bozeman, 1987, 2007; Stoker, 2005, 2006; Bryson, Crosby, and Bloomberg, 2014). Barry Bozeman’s extensive discussion of these frameworks is useful here, and may be found in his book *Public Values and Public Interest* (2007). Bozeman’s provisional definitions of public concepts are replicated in Table 13.1. According to Bozeman, publicness is determined through the exercise of political authority and democratic accountability. In Bozeman’s view, organizations may be described in terms of the extent of their publicness or privateness, giving theoretical and philosophical credence to the possibility of sector blurring. Publicness becomes a normative value that may be applied to the complicated arrangements found within governance networks. Recalling our discussion of sector blurring in Chapter 9, an organization that is a member of a governance network will be subjected to influences that may affect the extent to which it is more or less public. Captured governments within a regulatory network will be influenced more by the market accountabilities of the regulated entities (see Application M, Mills and Koliba’s

(2014) study of the Deepwater Horizon oil spill, as an example). Nonprofit organizations receiving government grants may become beholden to the political authorities that dictate the actions of their public funders. Private businesses may voluntarily or involuntarily integrate consideration of the public interests into their rhetoric, behaviors, and actions. (For a good example, see Application N, Mills, Koliba, and Reiss's (2016) study of airline safety regulation.)

Determining public interest requires us to consider the question of which "public" we are referring to, giving rise to the possibility that there are, in reality, many publics whose interests must be considered (Stone, 2002; Bozeman, 2007).

Table 13.1 The Provisional Definitions of *Publicness*

<i>Key Term</i>	<i>Provisional Definition</i>
Public interest	An ideal public interest refers to those outcomes best serving the long-term survival and wellbeing of a social collective construed as a "public."
Public values	A society's public values are those providing normative consensus about (1) the rights, benefits, and prerogatives to which citizens should (and should not) be entitled; (2) the obligation of citizens to society, the state, and one another; and (3) the principles on which governments and policies should be based.
Public value criteria	Public value criteria are used to investigate the extent to which public values seem to have been achieved. Public value failure occurs when neither the market nor public sector provides goods and services required to achieve public values.
Publicness	"An organization is 'public' to the extent that it exerts or is constrained by political authority" . . . "An organization is 'private' to the extent that it exerts or is constrained by economic authority" (Bozeman, 1987, pp. 84–85).
Normative publicness	An approach to values analysis assuming that a knowledge of the mix of political and economic authority of institutions and policies is a prerequisite of understanding the potential of institutions and policies to achieve public values and to work toward public interest ideals.

Source: Bozeman (2007). *Public values and public interest: Counterbalancing economic individualism* (p. 18). Washington, DC: Georgetown University Press. Reproduced with permission of Georgetown University Press.

Couple this with the wickedness of problems, and it is logical to conclude, as many have done, that what defines the publics' interests depends on whose interests are accounted for and how those interests are framed. The shift in the literature from public interest to public value has arisen, in part, as an attempt to render a clearer set of criteria through which the public interest (however it ultimately gets defined) is construed (Stoker, 2005, 2006; Bryson, Crosby, and Bloomberg, 2014). Public values are derived from the fundamentals of democratic theory. Public values are those that exist when the sovereign relationship between a democratic state and its citizens is legitimately honored. By choosing to view accountability and performance as two of the major critical considerations necessary to the study of governance networks, we point to some ways to evaluate the democratic anchorage of a governance network in practice.

The governance network analysis framework has been the result of the evolution over the course of decades of countless studies and theoretical advances in the study of the relationship between governments, public policies, nonprofit organizations, and market forces. By appealing to practitioners and students as well as researchers and theorists, we have assumed that a good theory (or conceptual framework, to borrow Ostrom's term) is good for practice and conclude that democratically accountable network managers will need to utilize some of the tools of analysis and the strategies of implementation alluded to in this volume.

In our discussion of modeling in Chapter 12 we alluded to the possibility of developing models of governance networks in much the same way as natural and engineered systems are being modeled. Through use of advances in tools and techniques governance, networks may be simulated and used to design networks in real time and space. The proliferation of the collective impact framework discussed in Chapter 11 speaks loudly to this point. *Increasingly, network development is being used as a policy strategy.* The increasing computing capacity of high-speed computers will make it possible to map, model, and simulate governance networks, with applications that likely include the coupling of governance systems with social, ecological, and technological systems (Koliba, Zia, and Lee, 2011; Zia et al., 2010, 2017; Zia and Koliba, 2013, 2017; Koliba, Wiltshire et al., 2016).

Governance has always been a complex endeavor, beginning with the first conflicts to arise between two actors in Thomas Paine's thought experiment. Governance has always encompassed the interplay of public, private, and nonprofit sectors. Challenges pertaining to geographic scale have always accompanied civilized human development (as rural-urban tensions, as city-state–nation-state tensions, etc.). Actors immersed within governance networks have always traded some form of capital resources while pooling others. These dynamics have not emerged with the development of the nuclear bomb, color television, or performance-based contracting. These dynamics have persisted since the dawn

of recorded history. *However, the contexts and situations have changed and evolved.* The wickedness of problems has become more endemic. Some actors have gained power; others have lost it. Some new skills and strategies have emerged to more effectively manage complex dynamics, while some other skills and strategies have been used to hold back progress. What is clearly “new” in all of this has been our growing capacity to describe, evaluate, and design these complex dynamic systems. Applying these new skills, tools, and techniques serves as the basis of a smart governance system populated by actors serving as accounters, accountees, resource providers, resource takers, leaders, followers, peers, owners, consumers, citizens, interest groups, and network managers. Those possessing a deeper awareness of complex system dynamics will be at an advantage. Let us hope that we may extend these tools to all with a stake in the future. We believe that the integrity of our very democracy may rest on it.

Note

- 1 Inauguration Speech (2009).

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